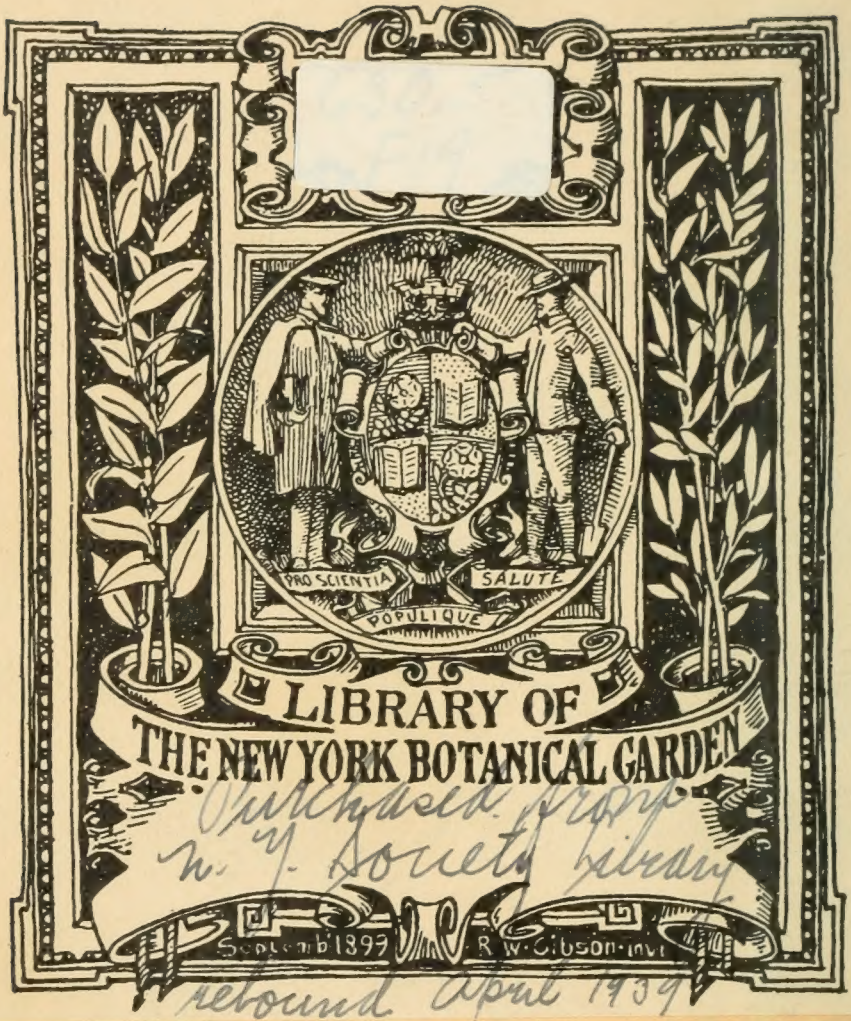

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THE FARMER'S MAGAZINE:

A

PERIODICAL WORK,

EXCLUSIVELY DEVOTED TO

AGRICULTURE,

AND

RURAL AFFAIRS:

1800.

Ye gen'rous Britons, venerate the PLOUGH,
And o'er your hills, and long withdrawing vales,
Let Autumn spread her treasures to the Sun. THOMSON.

FIFTH EDITION.

VOL. I.

THE PROPERTY OF THE NEW-YORK HISTORICAL SOCIETY LIBRARY
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TO

SIR JOHN SINCLAIR, BART.

OF

ULBSTER, M. P.

SIR,

YOU cannot be ignorant, that the language of dedication is much oftener the vehicle of flattery than the organ of truth; and that, upon numerous occaſions, in place of anſwering any uſeful or reſpectable purpoſe, it has been the means of turning both the author and his patron into ridicule. Were we permitted to indulge the feelings ariſing from private friendſhip, founded upon a knowledge of the amiable and reſpectable qualities you poſſeſs, theſe would furniſh them enough, and to ſpare: For that, however, there is no occaſion; the comprehenſive mind, who planned and perfected the STATISTICAL ACCOUNT OF SCOTLAND, and afterwards completed the SURVEY of the RURAL ECONOMY of the whole kingdom, ſtands in no need of individual praiſe. When the benefactors of mankind are mentioned, the

name of that perſon, whoſe unequalled exertions have, in ſpite of difficulties, almoſt inſuperable, been the means of contributing, in ſo remarkable a manner, to direct the induſtry, and promote the happineſs of a great nation, will live in the minds of poſterity.

Your rank in the ſcale of ſociety, the high degree of reſpect in which you are ſo deſervedly held, added to the zeal you have ſhewn for the improvement of Britiſh Agriculture, encourage the promoters of the preſent Work to hope, that under your auſpices, it will meet with the ſame favourable reception from the public, that every thing, in which you have hitherto been concerned, has done. They at the ſame time flatter themſelves, that this Dedication will convey to you, and to the Public, at once, a teſtimony of the high regard in which they hold both your private and public virtues. With theſe ſentiments, which they will ever be proud to avow, they remain,

SIR,

Your faithful and obedient Servants.

THE FARMER'S MAGAZINE,

MONDAY, JANUARY 6. 1800.

(No. I.)

INTRODUCTION.

AGRICULTURE is of ſuch antiquity, as to be coeval with the firſt formation of Society. Accordingly, in the remoteſt ages, and amongſt every people of whom we have any authentic hiſtory, we find the cultivation of the earth forming the principal employment of the inhabitants, and by all of them held in ſuch veneration, as to have its origin aſcribed to ſome deity or other. The Egyptians aſcribe it to *Oſiris*, the Phœnicians to *Dagon*, the Greeks to *Bacchus*, and the Chineſe to *Fo-hi*.

Though we are deſtitute of authentic materials, to enable us to ſpeak, with any degree of certainty, as to the wants of men in the rudeſt ages, or the means of ſupplying them, we have good reaſon to believe that their ſuſtenance was derived chiefly from the foreſt, the ocean, and the milk and fleſh of the few domeſtic animals of which they were then in poſſeſſion: accordingly, we find, that the diſtricts abounding with fiſh, game, and paſture, were peopled, and became the abodes of men, long before any other. It is impoſſible even to form a conjecture how long men continued in this ſituation; probably it laſted many ages; indeed there are many nations, who, at the preſent time, have no better reſources.

It is obvious, that, even in the moſt fortunate of theſe ſituations, many circumſtances would concur to diminiſh, or even entirely to cut off, the uſual ſupply. The fiſher, for inſtance, whoſe ſole dependence, for his own and his family's ſubſiſtence, reſted upon his ſucceſs in fiſhing, and

was prevented, either by a long continuance of ſtormy weather, or the fiſh forſaking the coaſt, from procuring what was neceſſary, muſt have ſuffered uncommon diſtreſs, and been reduced to the neceſſity either of removing to a different part of the coaſt, or attempting to procure ſubſiſtence in ſome other way. The unſucceſsful hunter, and he who depended upon the produce of his flocks, from a ſcarcity of paſture, or diſeaſes attacking the animal, would be in no better a ſituation.

The failure of any, or all of theſe reſources, muſt not only have occaſioned uncommon diſtreſs upon many occaſions, but coſt many lives, and operated to the almoſt entire extinction of the human race. It is obvious, that ſuch a ſtate muſt not only have been extremely unfavourable to population, but highly inimical to the introduction of any of the arts connected with the immediate and indiſpenſable comforts of ſociety. As a proof of this, we find, at this day, the nations who live in the manner above deſcribed, without arts, and very thinly inhabited; indeed, the population of many of the Indian nations of North America has decreaſed conſiderably within the laſt thirty years.

Frequent calamities, of the kind we have mentioned, would naturally lead men to ſeek after articles of food that could be procured with more eaſe, and, at the ſame time, afford a permanent ſupply throughout the whole year. Perhaps, the diſcovery of curing fiſh and the fleſh of animals with ſalt, or otherwiſe, was the firſt ſtep towards ſecuring a ſtock of Winter food in theſe rude ages *; and, certainly, to people formerly unacquainted with the art of preſerving theſe articles, it was no inconſiderable advance towards the improvement of their condition.

Amongſt

* The Eſquimaux, and many of the tribes who inhabit the ſea coaſt, even to the ſouthward of them, have no other food in Summer but ſmall fiſh, and the fleſh of whales, ſeals, &c.; a part of which they cure during that ſeaſon, and eat it with train oil through the Winter.

Amongſt a people unacquainted with the means of multiplying and rearing domeſtic animals to the proper extent, there muſt, even though they were poſſeſſed of the art of curing their fleſh, have been a deficiency of food, which would, as population increaſed, become every day more apparent, and prompt them to ſearch for other articles. The different kinds of fruit and herbs would, in all probability, be firſt had recourſe to, and would form no inconſiderable addition to their former reſources. They would alſo ſoon perceive, that both the milk and fleſh of their animals were improved by good feeding during the Winter. This would naturally lead to the cutting and preſerving of green herbage for that purpoſe: hence the origin of *hay*.

The cultivation of grain, and the other vegetables now in uſe, belongs to a more advanced period of ſociety; and many ages muſt have elapſed, before men, who were deſtitute of any other helps than thoſe derived from experience and obſervation, could attain even an imperfect knowledge of Agriculture. The ſacred writings inform us, that NOAH underſtood Huſbandry; of courſe he taught it to his deſcendants: and, as it is one of thoſe arts, which, when once known, the wants of men will for ever prevent from being loſt, we may naturally conclude, that it has continued its courſe, with various progreſs, from that period, down to the preſent day. Many circumſtances have, no doubt, contributed to favour that progreſs in ſome ſituations, and retard it in others. The hiſtory of the Egyptians, Babylonians, Phœnicians, and many other ancient nations, alſo informs us, that they were well acquainted with Agriculture. The pretenſions of the Chineſe go ſtill farther back. They claim, and not without ſome foundation, the precedence of all the countries we have mentioned. Huſbandry, without queſtion, flouriſhed in China at a very early period, and was then deemed of ſuch importance, and held in ſuch reſpect, as to claim the firſt, and indeed the principal attention of the government. The Emperors, in order to impreſs all orders of the community with proper ideas of its importance, condeſcended, once a-year, to hold the plough, in preſence of their chief nobility, the great officers of ſtate, and

the whole inhabitants of the capital; a cuſtom that is ſtill kept up, and deſerves to be imitated by all ſovereigns *.

At a period ſo remote as the preſent, and without the means of correct information, it is a difficult taſk to aſcertain to which of theſe countries the preference is due. The moſt probable conjecture is, that each of them is entitled to a ſhare; and that the agricultural knowledge of which they were then in poſſeſſion, in place of belonging excluſively to any one, was the united ſtock of the whole. Indeed, if we reaſon from what we know, and compare modern with ancient times, we will be ſatisfied that this was actually the caſe. The huſbandry of Britain, originally rude and imperfect, has arrived by degrees at its preſent ſtate. This, however, has not been owing to the ſuperior ſkill, or the ſucceſsful practice, of any particular county or diſtrict, but to the united talents and induſtry of the whole. Is there any reaſon to doubt that this was the caſe with the ancients? Be that as it may, we certainly derived the rudiments of the art from that quarter; and though, in the weſt of Europe, and eſpecially in Britain, it has attained a high degree of perfection, truth, and a juſt ſenſe of the benefits reſulting from its introduction, oblige us to acknowledge the Eaſt as the ſchool in which the firſt principles were taught.

Of the ſlow progreſs of Agriculture, and the difficulties encountered in the firſt attempts to cultivate the earth, we may form

* In this place, it may be proper to obſerve, that the long duration of the Chineſe empire, and form of government, which has no equal in hiſtory, as alſo the riches and proſperity of that country, are to be aſcribed, in a great meaſure, if not entirely, to the perfection of their Agriculture, and the ample ſupply of every neceſſary of life thereby produced. Their rural economy being of the moſt minute and perfect kind, demands the labour of a number of hands, greatly exceeding what are employed in almoſt any other part of the world. The produce, however, is great in proportion; and, at this day, it is computed that nearly ſeven eighths of the inhabitants of China are artizans, and owe the neceſſaries of life to the labour of the remainder; this great majority being employed in arts, manufactures, and commerce.

form ſome idea. The inſtruments originally made uſe of were, undoubtedly, very rude, and ſuch as could be managed by the hand only, perhaps ſimilar to our ſpade and hoe. The want of metals, together with their ignorance of the uſe of them, eſpecially iron, would occaſion theſe inſtruments to be conſtructed of hard wood. Agriculture, under ſuch circumſtances, muſt have been attended with a degree of perſonal labour, of which, in our preſent improved ſtate, we can form but a very imperfect idea.

Laborious as theſe operations were, and low and abject as the ſtate of human nature muſt have been, there is a circumſtance, connected with their hiſtory, ſtrongly deſcriptive of the benefits ariſing from the united powers of men, even in the rudeſt ages; and from which we may date all the advantages enjoyed in the moſt improved ſtate of civil ſociety.

We are told, that, in ancient times, (and the example of ſeveral nations, at this day, leaves little room to doubt the fact), the whole ſoil was cultivated for the general benefit, every member of the community being obliged to contribute his perſonal labour and aſſiſtance during the ſeed time and harveſt; in return for which, a due proportion of the produce was aſſigned him. Perhaps one cauſe of this would ariſe from the lazy indolent members of the community neglecting to cultivate a ſufficiency of food for themſelves and families, and by that means becoming a burden upon the induſtry of the reſt. It is, however, probable that the moſt powerful motive for this union was owing to another cauſe.

It requires ſlender experience to convince men, in any ſtage of ſociety, that the united ſtrength of the whole exceeds, in a very uncommon proportion, the ſolitary unaſſiſted exertions of individual labour. The fable of the bundle of rods, ſo expreſſive, and now ſo familiar, undoubtedly belongs to that period, and muſt have forced itſelf upon the notice of every mind capable of obſervation. Without all queſtion, the collected talents and exertions of the individuals of which any community is compoſed, conſtitutes a common ſtock, from whence the happineſs and comfort of the whole are derived. Any ſyſtem, therefore, that was calculated to

bring theſe into action, muſt, by ſtimulating the indolent to exertion, have removed a load from the great body, and eſtabliſhed a balance between the labours and comforts of the whole.

But, to return to the ſubject, many inſtances can be adduced of the imperfection of the inſtruments originally uſed in Huſbandry, and the ignorance of the firſt cultivators. At a period ſo near our own times as the conqueſt of Peru, the inhabitants of that devoted country were found by the Spaniards in the ſituation we have deſcribed: every thing was done by manual labour, without any aſſiſtance from beaſts of draught or burden: they turned over the earth with an inſtrument reſembling a ſhovel, and afterwards dibbled in the grain: even now, there re many nations whoſe knowledge of Agriculture is not greater. The inhabitants of Chili make uſe of a piece of wood, of a crooked ſhape, ſomething like our plough, with which they turn over the ſoil; the ſeed is then ſown, and covered, by dragging buſhes over it in place of harrows. In the province of Lithuania, a part of ancient Poland, their plough is of the ſame rude conſtruction; and in many other parts of the Ruſſian empire they are in poſſeſſion of no better inſtruments. To come nearer home, the ploughs of the Shetland and Faro Iſles, and of Ireland, are as bad, and their Agriculture equally imperfect.

The inſtruments originally uſed, and ſuch as we have now deſcribed them, no doubt, went through all the different gradations, from the coarſeſt wooden ſhovel, to the plough. That inſtrument was uſed by the Egyptians at a very early period; it was alſo uſed by the Babylonians, the Phœnicians, and Grecks, and was well known in Paleſtine. The other inſtruments uſed in Agriculture would follow, as a matter of courſe: theſe, in their original ſtate, muſt alſo have been extremely rude, and much time, and great labour required, before men were able to perfect what was neceſſary for harrowing, thraſhing, and ſeparating the grain from the chaff, and, laſtly, of grinding it into meal. It would appear, that Agriculture had proceeded conſiderably to the weſtward, before it arrived at much perfection: It was reſerved for the ſhores of the Mediterranean,

diterranean, to furniſh poſterity with the pleaſing picture of a perfect Huſbandry.

Italy, and the northern coaſts of Africa, were, for ages, the favourite ſeats of cultivation, and the granary of the Roman empire; and, while that people were extending their dominion almoſt to the limits of the then known world, the bread-corn, and almoſt every other article of ſubſiſtence, neceſſary to the ſupport of their numerous legions, were drawn from theſe parts. The peruſal of Virgil's Georgics affords an undeniable teſtimony of the perfection of the Italian huſbandry. In that intereſting work, the wheel-plough, the harrow, the flail, the ſcythe, the reaping-hook, together with every other inſtrument now in uſe, are accurately deſcribed, as alſo the ſyſtem of cultivation purſued. Conſidering the period at which Virgil penned his Georgics, and the great difference of climate between Italy and Britain, the ſimilarity between the ſyſtem he lays down, and our modern huſbandry, is aſtoniſhing. Fallowing and irrigation, with their benefits, are particularly deſcribed, as are alſo the advantages ariſing from alternate green and white crops: His account of the management of the different kinds of domeſtic animals, is equally beautiful and correct.

To thoſe who are capable of tracing effects to their proper cauſes, the advantages produced by the Roman conqueſts will be ſtrikingly obvious; and though, at that time, their legions muſt have been conſidered as the ſcourges of the human race, by the people amongſt whom they came, the lapſe of ages, and the amelioration of the human condition, enables us to view them in a different light. The ploughman of Italy, when he became a ſoldier, and was ſent into Gaul or Britain, would neither forget his original employment, nor the comfort he would derive from practiſing it in the country where he was ſtationed. The troops kept by Rome in the diſtant provinces, were ſeldom relieved by others from Italy, and as ſeldom ſhifted from the ſtations where they were firſt placed; in that way, their reſidence became in a great meaſure permanent; a circumſtance extremely favourable, not only to the introduction, but to the perfecting of Agriculture.—The firſt

attempts

attempts would no doubt be made to cultivate the hardieſt of the Italian plants; a conviction that theſe could be matured in Britain, would lead them to introduce others more delicate; the natives of the country, ſtruck with theſe advantages, would ſoon learn to imitate an example that promiſed ſo materially to better their ſituation: The ſame thing would happen with regard to the other arts, which, by the time the Roman forces were finally withdrawn from Britain, had made ſuch progreſs, as to place the country in a ſituation enviable, when compared to what it was before the conqueſt.

From that æra we may with juſtice date the introduction of every thing connected either with the comfort or the elegance of life. In the ſavage ſtate, and even in the firſt ſtages of civilization, the labour and exertions of every individual muſt have been required, during the whole year, to procure a ſcanty and precarious ſubſiſtence, barely ſufficient to prolong a wretched exiſtence: circumſtances ſo adverſe muſt, as has been already obſerved, not only have operated as a bar to the introduction of other arts, but chilled and rendered torpid every faculty of the human mind. Man, ſo ſituated, diſcovers little of thoſe rational powers, by which, in the more advanced ſtages of ſociety, he is ſo eminently diſtinguiſhed. It is only in ſituations where the means of ſubſiſtence are ample, where the labour of a certain part of the community is ſufficient to provide the neceſſaries of life for the whole, and where a conſiderable proportion of the remainder are placed beyond the neceſſity of toiling to procure the firſt neceſſaries of life, that the powers of the mind develope themſelves; mental exertion and much bodily labour having, in almoſt every inſtance, been found incompatible, eſpecially in caſes where the ſole ſupport of the individual depends upon that labour. Accordingly, in the inferior walks of life, where the individuals have received little or no original education, and have, from their infancy, been doomed to a laborious employment, which has occupied the greateſt part of their time, we meet with innumerable inſtances where the rational powers are nearly extinguiſhed, and the individual, from never having been accuſtomed to think, and exceſſive hard labour,

is

is reduced to a mere machine, and in a ſituation little above that of the irrational animals.

To the introduction of Agriculture we are indebted for that dignified place now held by man in the ſcale of created beings. By having his ſubſiſtence ſecured, without the neceſſity of bodily labour, his ſolicitude has been in a great meaſure removed, and the powers of his mind allowed to expand, and raiſe him to that ſituation he was originally intended to fill. The ſame thing may be ſaid of the other arts of peace: from the period that Agriculture came to be ſo well underſtood, as to enable a part to raiſe corn and other neceſſaries for the ſupport of the whole, the attention of the remainder would be directed to other purſuits. There is a natural propenſity in man to aſpire to ſomething beyond what he poſſeſſes at the time. The firſt wants of life being once ſupplied, and a permanent proviſion made for them, new deſires would be felt. Warm clothing, and comfortable habitations, would be the firſt in order: fine clothes, and other elegancies, would follow in ſucceſſion, together with ſcience, literature, and the fine arts.

Theſe new wants and deſires, in many reſpects ſo different from the real wants and natural deſires of man in his original ſtate, have, in their progreſs, gradually produced ſuch a change on the face of ſociety, as none but thoſe who have had an opportunity of peruſing ancient hiſtory could believe. While a proportion only of the population is now required to provide the neceſſaries of life for the whole, the remainder are employed in arts, manufactures, and commerce, and in cultivating the ſciences. To trace the progreſs of any, or all of theſe, does not belong to a ſketch like the preſent; which has for its object only a delineation of the origin and progreſs of Agriculture, and its inſeparable connexion with the comfort and happineſs of the human race.

Hitherto it has been taken in a general ſenſe, and its effects, as far as they have had a tendency to better the ſituation of mankind, have only been noticed. Taking it in another point of view, as connected with national wealth and greatneſs, it aſſumes a high degree of importance, and claims, in the preſent ſtate of Europe, the moſt diſtinguiſhed atten-

tion

tion from every well regulated government. It requires ſlender knowledge of the preſent ſtate of ſociety, to convince any one, that, without Agriculture, Manufactures, and Commerce, no nation can be either great, populous, rich, or happy. Agriculture, however, is the foundation upon which the other parts of national greatneſs reſt; without it, none of the others can have place. Indeed, in taking a ſurvey of the different ſtates of Europe, it may be aſſumed as a principle, that the nation moſt diſtinguiſhed for an extended and ſucceſsful Agriculture, holds the higheſt place in the ſcale. The cauſe is obvious: In countries where grain and other vivres are plenty and cheap, the lower orders of the community marry early in life, and have numerous families; the population, and the number of hands neceſſary for carrying on arts, manufactures, and commerce, is by that means increaſed; and as in every ſituation the price of labour bears an exact proportion to that of bread and other neceſſaries, it never fails to follow, that, in every country where theſe are abundant, the manufacturer is enabled to bring his commodities to market at an eaſy rate, and in that way to underſell the merchant or manufacturer of another country, where living is more expenſive, and, of courſe, the price of labour higher. Britain, at this moment, furniſhes a ſtriking example in ſupport of this truth. Much of the preference given to Britiſh commodities in foreign countries, is, no doubt, owing to the ſkill of our tradeſmen, and the excellence of their workmanſhip; but, when to that is added, the cheapneſs of the articles, and their ſuperiority over every other, the preference they meet with in all quarters of the world will excite no ſurprize; and, as that circumſtance enables us to ſupply other nations with articles of much more value than what we need in return, the difference is received in money, which, by giving us a command of reſources beyond what is poſſeſſed by any other power, enables us to hold the exalted rank we now do in the ſcale of nations. While our Agriculture continues to flouriſh, this will be the caſe; an extenſion of it, under the foſtering hand of Government, which has been already ſtretched out for that purpoſe, will increaſe our independence,

pendence, and make us at once formidable and reſpectable in the eyes of ſurrounding nations. To thoſe who preſide at the helm of ſtate, the taſk is eaſy; and to minds poſſeſt of benevolence, like theirs, the gratification is exquiſite. To command armies, and direct the operations of war, requires no common degree of courage and firmneſs of mind: Even with theſe requiſites, unforeſeen events may derange the beſt concerted plans, overwhelm the beſt cauſe, and plunge a whole nation into the loweſt abyſs of miſery. The mind, capable of drawing the attention of a numerous people to their true intereſts, and of reconciling an increaſed induſtry with ſimplicity of manners, and correct morals, meets with a nobler recompenſe. Conqueſt and ſucceſs confer a name that dazzles the world; but it is inferior to that acquired by thoſe who have turned their attention to inſtructing men in the arts of peace, of directing their purſuits, and endeavouring to increaſe their happineſs. The name of an Alexander has, no doubt, inſpired many a romantic mind; but that of any of the rural deities commands a more extenſive, as well as a different ſuffrage. In the one we behold a conqueror, wading through ſeas of blood, and ſacrificing every thing to his ambition; in the other we contemplate the benevolent care of an affectionate parent, anxious to promote the happineſs, and direct the future proſpects of his family.

Having, in this haſty and imperfect manner, attempted a ſketch of the origin and progreſs of Agriculture, together with the benefits that have reſulted from it, we think it neceſſary to ſay ſomething of the plan of the preſent Work, and the motives by which thoſe who take an intereſt in its ſucceſs are actuated.

The preſent ſtate of Britiſh Agriculture, and the known eminence of many who practiſe it as a profeſſion, are ſuch as might juſtly draw upon the individuals who now addreſs the public, the imputation of arrogance, were they to preſume to improve the ſyſtem by any ſuperior knowledge or abilities of their own. They think it neceſſary, in the outſet, to ſay, that it is not upon their own knowledge and experience they rely for carrying on the work, but upon the communications

nications of reſpectable and intelligent farmers, who have made Agriculture their particular ſtudy; and who, in place of amuſing the public with *opinions*, are able to bring forward *facts*, which, under the ſanction of *experience*, can be immediately adopted in practice. A want of attention to this fundamental principle, has rendered the greateſt part of what are termed regular treatiſes upon Agriculture uſeleſs. Many of theſe have been drawn up by individuals, who, from having reſided during the whole, or the greateſt part of their lives, in particular diſtricts, have formed opinions, and imbibed prejudices, in many reſpects hoſtile to the cauſe they profeſs to promote. Such authors, in general, diſcover more anxiety for the fate of their own opinions, than for the advancement of knowledge; and, in place of ſelecting facts for the baſis of their works, and, reaſoning from theſe, their ſolicitude to form ſyſtems of their own, has led them to bend facts to theories, and involve themſelves in perplexity and error. In that way, ſociety, in place of being benefited by their labours, is plagued and miſled by their controverſy; and, inſtead of a true picture of the huſbandry, either of a diſtrict, or the kingdom at large, we meet with little more than the opinions of the author, clogged with his prejudices, and a laborious attempt to form a ſyſtem ſuitable to theſe.

To the genius of a few reſpectable characters we are indebted for a better ſyſtem, founded upon experiment and attentive obſervation: a channel through which alone juſt ideas can be acquired, either upon this, or any other ſubject. Accordingly, of late years, many of the ſpeculative opinions, with which we were formerly amuſed, have given way to the ſimple unerring truths taught by experience; and though much labour and inveſtigation ſtill remain, we have the ſatisfaction of knowing, that the path hitherto traced is upon ſolid ground; and are enabled to look forward, with confidence, to a period, (perhaps not a diſtant one), when the ſyſtem will be much more perfect, and our doubts leſs numerous, upon many points of the firſt importance to Agriculture. That, however, is to be accompliſhed, not by the propagation of fanciful opinions, but by details of ſucceſsful practice, and

in all cafes having an example ready at hand to illuſtrate our precept.

It is well known, that, upon ſubjects purely ſpeculative, where no experiments can be made, and of courſe no abſolute certainty obtained, much diverſity of opinion is met with, which, from their nature, might be expected, and will for ever be the caſe. The perſon who reaſons beſt upon ſuch ſubjects, will, in the opinion of men of ſenſe, be thought to come neareſt the truth, and his doctrine conſidered the ſtandard, till ſome competitor appear, whoſe reaſoning is more perſuaſive. This has been the fate of all ſpeculative opinions ſince the earlieſt ages, and will continue to be ſo, upon every ſubject that affords no certain data to direct the reſearch of inquirers. Converts, amongſt enlightened farmers, are not to be gained by theories and opinions: Before we lay claim to their belief, the principles upon which our own is founded, ought to be explained in a ſatisfactory manner, and that, not by reaſoning alone, but the evidence of facts. Upon the preſent ſubject, this is in a great meaſure in our power, as moſt of the important points connected with Agriculture admit of being illuſtrated by experiments. One fact, ſo eſtabliſhed, is ſuperior to a thouſand arguments; and, inſtead of being liable to change, as all opinions unſupported by facts muſt be, it ſerves as an unerring guide; and, inſtead of an opinion, aſſumes the name and importance of a principle. Were this ſyſtem uniformly purſued; were men only to relate facts, and communicate their diſcoveries in the language of truth and plain ſenſe; to place them in the common ſtock, and allow time and experience to form a whole from theſe parts: agricultural ſcience would ſoon aſſume a more perfect form; authors would have no ill-founded opinions to retract or defend; pride and error would be no longer oppoſed to truth, and the progreſs towards perfection would be certain and uniform.

With this maxim before them, the promoters of the preſent undertaking beg leave to aſſure the Public, that it ſhall be their ſtudy to encourage and promote, as far as poſſible, a ſpirit of inquiry and experiment amongſt agricultural men,

and

and to record faithfully the reſult of ſuch information as may be communicated to them. Of theſe inquiries and experiments, ſome idea may be formed from a peruſal of the Queries publiſhed in the preſent number, to which they entreat the attention of all intelligent farmers, whoſe communications will be received with thankfulneſs, and have all due attention paid them. One thing it is neceſſary to notice: Many farmers, from a diffidence of themſelves, are withheld from communicating their obſervations to the public, from an apprehenſion, that their ſtyle and manner of writing are unfit for publication: In that way, many facts and obſervations, highly intereſting to ſociety, are either entirely loſt, or but very partially known. To ſuch we beg leave to ſay, that, provided facts, properly authenticated, and ſound obſervations, are furniſhed, the ſtyle of the author will be conſidered as a matter of inferior conſideration. For reaſons that will appear obvious, the preſent number cannot be conſidered as a fair ſpecimen of the work; the intention of publiſhing being known only to a few, and the ſhort time that has elapſed, ſince it was firſt announced, having prevented ſeveral valuable papers from being brought forward. It is however hoped, that enough has been ſaid to explain the nature of the undertaking, and the intentions of thoſe who promote it, and who have no other intereſt in its ſucceſs, than what ariſes from a wiſh to render it uſeful to the community.

THE

FARMER's MAGAZINE:

MONDAY, 20. JANUARY 1800.

(No. I.)

PART I.

ORIGINAL COMMUNICATIONS.

FOR THE FARMER'S MAGAZINE.

Obſervations upon the additional Statiſtical Account of the pariſh of HOUNAM, *Roxburghſhire.*

" The whole body of perſons in a country, whoſe abilities are applied to unfruitful employments, are exactly the ſame as if they were not in being; their negative exiſtence is even a heavy burthen to the country, as every individual who only conſumes, requires a productive individual, whoſe labour muſt inſure the exiſtence of the former." *Tooke's View of the Ruſſian Empire.*

IT has been a principle aſſumed by a great number of the Clergy, that *large farms*, or, in other words, that an accumulation of farms, in the hand of one perſon, is unfavourable to population; and this, except in a few inſtances, they have taken for granted, without offering a proof. In the 21ſt volume of the Statiſtical Account of Scotland, p. 10th, ſome additional obſervations, by the Rev. Mr *James Rutherford*, are made to his former account of the pariſh of Hounam; and we ſelect the following paſſages, p. 16. *et ſeq.* upon which we mean to make our remarks.

" The great and moſt obvious cauſe of the decreaſe of the inhabitants, within the laſt thirty or forty years, is owing to the (perhaps too general) practice of letting the lands in great farms, and to the mode of agriculture now almoſt univerſally adopted, eſpecially ſince ſheep and wool brought ſo high a price, of laying down the whole lands in graſs. The lands formerly, from 40 to 100 years back, were parcelled out into four times, at leaſt, the preſent number of farms: there was alſo much of theſe farms in tillage: and, conſequently, a greater number of people could be maintained, and more hands would be neceſſary for carrying on the labour of the lands. So late as the year 1756, there were no fewer than ſeven tenants, with large families, on the lands of Hounam, now all united by

by one tenant, who employs only one ſhepherd. There were alſo ſeveral ſmall lairds: their lands are loſt in the large farms, their names extinguiſhed, and their manſions confounded in the duſt.

"Though this laſt cauſe operates moſt ſtrongly in depopulating the pariſhes where the monopoly of farms is frequent, yet it is by ſome made a queſtion, Whether it tends to depopulate the country at large, in any great meaſure? No doubt, the towns and villages will increaſe as the country pariſhes diminiſh; and therefore, in this diſtrict, the villages of Yetholm and Morbattle have of late conſiderably augmented in the number of inhabitants and houſes; yet it does not ſeem to be in the ſame proportion as the country diſtricts around them have diminiſhed. In this pariſh, where the real rent is 2720l., were the farms four times the preſent number, namely, 56, or the lands divided into farms of 50l. each, which would amount to much the ſame number, at leaſt 54; in this caſe, there would be 54 or 56 tenants in the pariſh, inſtead of 14, the preſent number; and each of whom might have a large family of his own, and employ a ſhepherd, who might alſo have a family; and the other inhabitants and cottagers might be the ſame in number as at preſent. This, ſurely, would make a prodigious odds in favour of the population of the pariſh, and afford alſo a ſufficient extra number, who would find it neceſſary to withdraw to the towns and villages. Country places, too, are more favourable than towns to the rearing of young children: here they are healthier, and thrive better.—Beſides, hinds and ſhepherds, driven from their native abodes and manner of life, will be diſheartened, and diſcouraged from marrying: it will be with difficulty they can afterwards find the means of ſubſiſtence. It is obſervable, that in England, which is far more populous and richer than Scotland, the monopoly of farms is little known. In many places of Scotland, particularly the diſtrict to which Hounam belongs, a ſingle individual has not only united four or five farms into one, in one pariſh, but has ſeveral farms united in this manner, in different pariſhes. Theſe circumſtances, taken together, ſurely make it very evident, that the monopoly of farms, and increaſe of paſturage, is a great injury to the population of the country at large."

The cauſes above aſſigned for the decreaſe of population, viz. the practice of letting the land in great farms, and the mode of agriculture adopted, of laying down the whole lands into graſs, are obviouſly diſtinct and ſeparate, and have no connexion with each other; for the land may be let in ſmall farms, and the graſs huſbandry recommended by Mr R. remain; or, it may be continued in tillage, and ſtill large farms be the prevalent practice. It does not follow, that a large farmer ſhould have a greater proportion of graſs than his ſmaller neighbour:—No; this is regulated by inclination, by ſoil, and by the ſtate of markets; and to the two laſt every good farmer will pay particular attention, whatever may be the ſize of his poſſeſſion.

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If the generality of the pariſh of Hounam can be more profitably employed in raiſing graſs, than under a ſyſtem of tillage, which we underſtand to be the caſe, it may be concluded, without further demonſtration, that the intereſt of proprietors, the advantage of tenants, and the good of the State, are all concerned in keeping it under that mode of management, becauſe under no other can it make ſuch returns to the proprietor or tenant, or add ſo much to the national capital. The only queſtion remaining, is, How this management is to be carried into effect at the leaſt poſſible expence, and with the greateſt advantage to the public?

In every graſs farm, we mean farms where ſheep are bred, practical men know well, that, to attain perfect management, it is neceſſary to have different *hirſels* or flocks, ſo as the old and young, the wedders and ewes, may each be fed upon the ground moſt proper for their growth and conſtitution. This of courſe requires, that a ſheep farm ſhould be of conſiderable extent, otherwiſe the profit of the ſtock, inſtead of paying the landlord an adequate rent, or ſupporting the tenant in a ſuitable manner, would be conſumed by the wages of numerous idle ſhepherds, for whom there would not be half employment.

It has long been held as an axiom, that, to make manufactures flouriſh, it is neceſſary to ſimplify labour as much as poſſible, and, by the aid of machinery, to carry on work at the ſmalleſt expence. This, if applied to agriculture, which ſeveral political writers have conſidered as the firſt of manufactures, it muſt be admitted, that the ſyſtem of management which makes the greateſt return at the leaſt charge, is the one moſt conſiſtent with the welfare of thoſe engaged in that profeſſion. We have already ſaid, that the ſheep huſbandry appears moſt adapted to the ſoil and climate of this pariſh; and, from what is mentioned above, it follows, that, as this huſbandry can only be carried on with advantage where the farms are of ſufficient extent to provide for different hirſels or flocks; conſequently, that ſmall farms, under theſe circumſtances, are a certain loſs to the landlord, unprofitable to the tenant, and detrimental to the public good, as they do not admit the ſame juſtice to be given to the feeding of ſheep, as thoſe of a greater ſize.

This brings us to the point at iſſue—the proper ſize of a ſheep farm. It is evident the anſwer muſt always be regulated by the nature of the ſoil, the kind of ſheep kept, the facility of raiſing winter crops for the ſupport of the ſtock, and by other material circumſtances. One general anſwer, however, may be given, viz. That in no part of the ſouth of Scotland, ſince rents roſe to their preſent pitch, can a farm of 200l. rent be called too large. We ſhould rather be inclined to think ſuch a one too ſmall for a ſtock farm, more ſo if any

one part of it is employed in raiſing hay or winter crops for ſupporting the ſheep during inclement weather. The rent of Hounam is ſtated to be 2700l., which allows it to be divided into 13 or 14 farms, of ſuch a ſize as can be managed in a way that will at once prove beneficial to the individuals concerned, and to the community.

In this place, Mr Rutherford objects:—By farms of this ſize, you decreaſe the population of the country, which would be benefited and increaſed conſiderably by dividing each of them into four. This objection does not touch upon the inquiry,—Whether theſe 56 farmers will pay as much rent to the proprietor?—Whether they and their families will live in the like comfortable manner?—and, Whether the national ſtock will be equally benefited, or the like quantity of food provided to the public by their labours (which we look upon as of the firſt importance)—as will be done by thoſe of the other deſcription?

Theſe points are paſſed over, and the number of inhabitants upon the premiſes is ſuppoſed to be the ſole criterion by which the management is to be judged.

Were this admitted as the ſtandard, every improvement in machinery, for facilitating labour, would be cenſured and condemned. The thraſhing machine, for inſtance, which is deſervedly ranked amongſt our moſt uſeful improvements, ought to be deſtroyed; ſpinning machines, ſaw mills, and numberleſs other contrivances to diminiſh manual labour, would deſerve to be conſidered as ruinous and deſtructive, upon the ſuppoſition of their having a tendency to depopulate the country.

There is certainly a miſchievous, as well as a uſeful population. We call uſeful, what is neceſſary for carrying on the trade, labour, manufactures, &c. of the country; but where more inhabitants are to be found than thoſe that can live, or, in other words, procure employment, we are certainly warranted to claſs them under the other deſcription. An increaſe of population, without an increaſe of reſources, muſt always be conſidered as hurtful. But as Mr R. wiſhes to fritter down the farms of his pariſh, in order to increaſe population, what would he think of dividing the *cure?*—a meaſure that would, in all probability, add ſeveral more families to the population. This idea, however ridiculous it may appear, is exactly in point with the reduction of farms; but, as we believe he is perfectly able to diſcharge the duties of his office without any aſſiſtants, we do not think the public good would be promoted by ſuch an increaſe.

Mr R. ſeems ignorant of his ſubject, when he propoſes to reduce the ſheep farms to the ſize of a 50l. rent. Inſtead of 56 tenants, and 56 ſhepherds, all with large families, the probability is, that there would be only 56 men, who would neceſſarily

ceſſarily be both tenants and ſhepherds, and a great part of them without any family. He ſeems alſo ignorant of the return which a 50l. farm would make to the poſſeſſor, or what would be the work upon it. Were the tenant upon ſuch a farm, under the preſent rents, not to keep his ſheep himſelf, he would be a Gentleman at firſt, having otherwiſe little or nothing to do, and a Beggar afterwards, when his ſtock was exhauſted, which would ſoon happen.

We now offer a few remarks upon the general cauſes which affect population, or occaſion an increaſe at ſome periods, without being followed by an increaſe of trade and manufactures.

The number of people in any country, will, for the moſt part, be regulated by the price of proviſions; with this exception, that if there is a great demand for labour, and wages riſe in a proportional manner, population may progreſſively increaſe, ſo long as the workman can ſupport himſelf and family by his earnings. When labour falls in value, without being accompanied by an equal fall in the price of proviſions, it is a ſure ſign of the decreaſe of trade, in conſequence of which a number of people are thrown out of employment. This occaſions emigrations from one diſtrict to another, perhaps from one country to another; and theſe emigrants ſettle in ſuch places as can give them employment, and where the value of labour is equal to what is required for the ſubſiſtence of themſelves and families.

If all the people born in a pariſh, county, or kingdom, were obliged to reſide in that pariſh, county, or kingdom, where they drew their firſt breath, it is evident the reaſons above aſſigned, as influencing population, would not operate, and that an unneceſſary or miſchievous increaſe would, in many caſes, be the conſequence. The ſurplus, which is conſtantly thrown off from particular diſtricts, where labour is ſcarce and wages low, for the ſupply of other diſtricts, where employment can be got with greater facility, or where the flouriſhing ſtate of trade and manufactures have raiſed the rate of wages, effectually prevents ſuch an increaſe from taking place, and corroborates what we have already mentioned, reſpecting population being at all times regulated by the cheapneſs of proviſions, or, in other words, by the means poſſeſſed for procuring the neceſſaries of life.

The ſcale of population may alſo, at certain times, be locally affected by a cauſe which is ſeldom attended to. Let us ſuppoſe the whole lands in a pariſh the property of one man, and that they are all out of leaſe at one period. The great body of the people in country pariſhes being made up of farmers ſervants, their number, under the above ſuppoſition, may be conſiderably increaſed by a total, or a partial change of tenants,

when the lands are re-let, without the leaſt alteration in the ſize of the farms. The generality of farmers, when they commence buſineſs, prefer young men, or thoſe lately married: hence, for a number of years afterwards, ſuch a pariſh will have an increaſed population, and the ſcale will not return to its ordinary level, before the families of thoſe ſervants are able to work, and remove to other parts, where their labour is wanted. We know of ſeveral farms preciſely under theſe circumſtances, and are acquainted with others, where the ſcale of population has been reduced, at particular periods, without the leaſt alteration having happened in the ſize or management of the farm. In ſhort, it is obvious that population may be augmented, or decreaſed, without any of the cauſes aſſigned by the generality of the clergy having operated.

One thing may be alſo noticed, which has probably occaſioned ſeveral of the clergy to think large farms unfriendly to population; that is, the change which has generally taken place in the beſt cultivated counties reſpecting the number of cottagers. As all tenants are taken bound to ſupport and leave the buildings in habitable condition at the end of their leaſes, and as the expence of repairs is now very great, it is found more eligible to keep up no more than are requiſite for accomodating the ordinary farm-ſervants. Hence mechanics, weavers, tailors, hedgers, ditchers, labourers who work at large, widow women, &c. are now removed to villages, and take employment where they can find it. This, of courſe, has contributed to leſſen the number of people reſident at farm-ſteadings, eſpecially at the large ones, where the claſſes above deſcribed, in former times, uſually reſided; while, at the ſame time, the population of the pariſh is in no reſpect decreaſed.

The population of Scotland, by the returns in the Statiſtical volumes, appears conſiderably increaſed; and this increaſe, as might be expected, has chiefly taken place in the manufacturing diſtricts, where the value of labour is high, and the demand for hands greateſt. In the counties entirely dependent upon huſbandry, it is obvious, population muſt always remain nearly ſtationary, unleſs ſome great and general change take place in the ſyſtem of management, or in the uſual mode of conducting farm-labour. The introduction of two-horſe ploughs had ſomething of this effect, though perhaps not ſo much as was imagined: an increaſe of luxury, by reducing the quantity of arable, and increaſing that of paſture land, may alſo locally affect the population of particular diſtricts. The returns from the agricultural counties, however, ſhow that there is not any material alteration in their population ſince 1755; and in Roxburghſhire it is increaſed.

Upon

Upon the whole, it appears, that the intereſt of the proprietor, the comfort and uſefulneſs of the tenant, and the good of the community, require that ſheep farms ſhould be of conſiderable extent; and that if the ſuggeſtions of Mr R. were reduced to practice, the rent of the landlord, the condition of the tenant, and the advantage of the State, would be leſſened and injured, while no benefit could poſſibly follow; unleſs the number of idle men and women, uſeleſsly living upon the premiſes, and conſuming the produce of the fields and the flocks, could be viewed as ſuch.

We have dwelt longer upon this ſubject than was intended; but we truſt that its importance, and the manner in which it has been diſcuſſed by a majority of the clergy, will be conſidered as a ſufficient apology. *N.*

FOR THE FARMER'S MAGAZINE.

On Manorial Claims.

[*The following intereſting Eſſay, on the operation of Manorial Claims, has been tranſmitted to us by a worthy friend in England, who is intimately acquainted with every branch of Rural Economy, the proſperity of which he juſtly views as a moſt important national concern. To our Scotiſh readers, the ſubjects here diſcuſſed will be almoſt new; conſequently, the peruſal of this paper cannot fail to afford them much information. While we earneſtly wiſh the removal of theſe grievances from our ſouthern neighbours, we at the ſame time exultingly contemplate the conſtitution of this northern part of the Iſle, which has happily ordered matters in a way more conducive to general advantage.*]

It is not the intention of the writer of theſe deſultory hints, to enter much, if at all, into the Origin and Hiſtory of Manorial Claims; but to expreſs a few ideas, as they may ariſe, on the bearings and operation of ſuch claims on the exiſting ſtate of ſociety in this iſland; a ſtate ſurely very different from that in which the origination of manors found it, in regard not only to population, but to tenures and induſtry.

Theſe privileged claims or rights may be conſidered in ſeveral points of view, viz. 1. The Game of the Manor or Diſtrict. 2. Suit and Service to Freehold, and more particularly to Copyhold Courts. 3. Mill Sokes. 4. Waſte, or Common Lands. 5. Minerals. 6. and laſtly, Courts Leet, and Courts Baron.

1. The *Game of a Manor*, *i. e.* deer, hares, partridges, pheaſants, and moor game or grouſe, &c. was, at a remote period,

conſidered as the property of the Crown, but granted with the manor itſelf to an inferior lord, under the ancient foreſt laws, and has been, for many centuries, a fertile ſource of ſtrife and diſcord to the more ſpirited inhabitants of this and other countries. The regulations concerning this ſubject of legiſlative wiſdom, might ſeem indeed to have been invented with no other view; for though it were not probable that the lord of a manor, ſo granted, would have any diſpute with his ſuperior or grantor, yet the opportunities of haraſſing his inferiors, by efforts of petty tyranny, were ſuch, as perpetually to embitter the minds, and indeed ultimately to debaſe the character, of both the oppreſſor and oppreſſed. After a part of the lands within the manors had been alienated ſo generally in fee-ſimple during the reign of Henry VII. and in ſubſequent times, the purchaſers of ſuch lands, or their heirs, now become freeholders, very naturally conceiving themſelves intereſted in the game, in proportion to their acquiſitions of landed property, except in caſes of free warren; the difficulties of preſerving the monopoly of this object of diverſion and luxury, in the hands of the manorial lords, were much increaſed. Hence aroſe the apparent neceſſity of applying to the Legiſlature for a new code of game laws, the partiality and injuſtice of which are not more glaring than their abſurdity.

This famous code is ably explained by that excellent commentator on the Laws of England, Sir Wm. Blackſtone, in the following words, (Vol. IV. p. 408. 4th edit.) "Another "violent alteration of the Engliſh conſtitution, conſiſted in "the depopulation of whole counties, for the purpoſes of the "King's royal diverſion; and ſubjecting both them, and all "the ancient foreſts of the kingdom, to the unreaſonable "ſeverities of foreſt laws imported from the Continent, "whereby the ſlaughter of a beaſt was made almoſt as penal "as the death of a man. In the Saxon times, though no man "was allowed to chaſe or kill the King's deer, yet he might "ſtart any game, purſue and kill it upon his own eſtate. But "the rigour of theſe new conſtitutions veſted the ſole pro-"perty of all the game in England in the King alone; and no "man was entitled to diſturb any fowl of the air, or any beaſt "of the field, of ſuch kinds as were ſpecially reſerved for the "royal amuſement of the Sovereign, without expreſs licenſe "from the King, by grant of a chaſe or free warren; and "thoſe franchiſes were granted, as much with a view to "preſerve the breed of animals, as to indulge the ſubject. "From a ſimilar principle to which, though the foreſt laws "are now mitigated, and by degrees grown entirely obſolete, "yet from this root has ſprung a baſtard ſlip, known by the "name of the Game Laws, now arrived to, and wantoning in

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"its higheſt vigour; both founded upon the ſame unreaſon-
"able notions of permanent property in wild creatures; and
"both productive of the ſame tyranny to the commons; but
"with this difference, while the foreſt laws eſtabliſhed only
"one mighty hunter throughout the land, the game laws have
"raiſed a little Nimrod in every manor. And in one reſpect
"the ancient law was much leſs unreaſonable than the mo-
"dern: for the King's grantee of a chaſe, or free warren,
"might kill game in every part of his franchiſe; but now,
"though a freeholder of leſs than 100l. a year is forbidden to
"kill a partridge upon his own eſtate, yet nobody elſe (not
"even the lord of the manor, unleſs he hath a grant of free
"warren) can do it, without committing a treſpaſs, and ſub-
"jecting himſelf to an action."

The partiality and injuſtice of this code is further apparent, in the attempt of the lords of manors to preſerve the monopoly of the game in themſelves or their deputies, by limiting the right or qualification to kill it, to the owner of 100l. per annum; while a man, having any quantity of land leſs than the above partial and unjuſt limitation, is prohibited from killing a hare or a partridge in his own field or garden. The abſurdity of the game laws is obvious; becauſe the very man who cannot kill a hare on his own field or garden, can prevent the one qualified by law from killing it there, by action of treſpaſs and damages, and previous diſcharge from his premiſes. It is neceſſary here to call the attention of the reader to the abſolute impoſſibility of rendering any law, authoriſing a marauder to enter the property of another man, under pretence of killing game, compatible with the ſacred ſecurity of property, ſo imperiouſly demanding the attention of every legiſlator. But, in addition to this, what ought to be the character of that law, which demands ten times as much to qualify a man to kill a partridge, as it does to qualify a juror to kill a man? In fact, ſince all theſe laws, inſtead of preſerving the game for the rightful owner, have been fabricated in the genuine ſpirit of a graſping monopoly, the preſent property in the game is completely veſted in the hands of the nocturnal poacher, who has, in moſt manors, even the *indiſputed* poſſeſſion: Indeed it is a neceſſary conſequence of all unjuſt laws, to create the very thing they are intended to prevent.

On the whole, theſe game laws form a grievance to the cultivator of the ſoil, not only becauſe he is generally debarred from any part of a pleaſure which the game on his farm might occaſionally furniſh, and to which he ſeems to have to unnatural a right; but becauſe his crops and fences are generally injured by men, with their horſes and dogs, taking liberties utterly inconſiſtent

inconſiſtent with that ſecurity of property which ought to be held inviolable in all civilized countries.

All this injuſtice and partiality, all this abſurdity and grievance, would be effectually baniſhed, were the whole code of the game laws repealed, and a new law enacted, founded on the principles of juſtice and equity; whereby the *abſolute* property of the game ſhould be veſted, as of common right it ought to be, in the proprietor of the land it can be killed on; whether ſuch land be a rood, or an acre; whether a garden, a field, or a wood. It will appear, from the above quotation from the learned and laborious Blackſtone, that this would be nothing more than a revival of the ancient Saxon or Britiſh law, which for ages had thus operated before the irruption of the Norman Conquerors; by whoſe fatal ſucceſs all the excellent and free inſtitutions of Anglo-Saxon policy were ſwept away, and on the ruins of which thoſe tyrannous maxims of the feudal and military ſyſtem, were firmly eſtabliſhed. A reaſonable objection to this repeal can ſcarcely be ſtarted; and the writer of this eſſay well remembers it as the decided opinion of that illuſtrious Peer, the late Marquis of Rockingham; the ſituation of whoſe principal manſion, in the vicinity of populous towns, rendered all attention to the preſervation of the game from poachers almoſt a joke, on the principles of the game laws, which, in addition to its obvious equity, might probably create a wiſh in him for the reſtoration of the more juſt and rational Saxon law.

2. *Suit and Service* to freehold and copyhold courts, to be performed in kind, as was more generally the caſe formerly, were of two kinds, viz. Free or military, and other ſervices appendant to the tenant in free ſocage; or, in other words, the holder or owner of lands in fee-ſimple of inheritance, anciently bokland, or bookland, *q. d.* Lands held by written charter or deed, now called Freehold. Theſe ſervices being conſidered as in ſome degree honorary and certain, were commuted by an eaſy payment, under various denominations, ſuch as quit-rents, free-farm rents, caſtle-guard rents, &c. &c. which it is not in the power of the lord of the manor to increaſe. The other kind, viz. mean or baſe ſervices appendant to the tenant in villain ſocage, or the holder or owner of lands, by copy of the court roll, at the will of the lord of the manor, and, according to the cuſtom of the ſame, anciently called *folkland*, now *copyhold*. Theſe ſervices conſiſted in cultivating the domain of the lord of the manor, and many other laborious operations, which being more important and ſubſtantial, were of greater value, and of courſe commuted, by payment of annualrents of much greater amount, and by fines, certain and uncertain, to be paid by the vaſſal or copyholder, who conſequently is in a

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ſituation at this day much inferior to that of the freeholder, whoſe payments are ſmall and certain. Theſe annualrents, or payments, are in ſome copyhold manors doubtfully impoſed, and fines are levied at the end of a term of years, which, in certain ſituations, are ſo high, as to render the ſecurity of property, expended in improvement of various kind, very dubious. Theſe fines have an indefinite proſpect on any future value the eſtate may poſſibly arrive to, by improvements, however extenſive or lucrative, to the great diſcouragement of ſuch improvements: in ſhort, they are ſuch as, with the ſuit and ſervice, &c. uſually exacted, leave the copyholder in circumſtances little removed from the ſtate of abſolute vaſſalage. The heritors of Durham, and ſome other parts of the country, are, in ſome ſort, of this deſcription; where the lord of the manor ſeizes, for his own uſe, the beſt horſe, bull, or cow, or other beaſt, which he can find on the premiſes at the demiſe of the holder. Under this diſagreeable tenure, are alſo levied fines on death, or alienation, of various kinds and degrees; all which, with the burden-ſome forms of ſome of the courts, the incidental expences of various kinds, and the extortions of the attorney ſtewards, who are continually racking their brains to invent pretences for increaſing their fees, &c. together with the very galling idea and ſenſe, in the mind of the holder, of the debaſing nature of this ſpecies of dependence,—form a burden and grievance on the ſubject, loudly calling for the interference of any Legiſlature which has a ſincere intention of acting on principles indiſſolubly connected with the public welfare. It were idle to inſiſt on any objection to a general alienation, by law, of all rights or claims of this nature, by which every body would be gainers, and nobody loſers: for it is the duty of individuals to do this voluntarily, as much as in them lies: and if individuals refuſe, it is the bounden duty of the Legiſlature, on a general ſcale, to do any thing, and every thing in its power, towards the removal of grievances which may and ought to be removed, and to which nothing can be objected, but the pride and caprice of a few individuals; juſtice being no further concerned than in pecuniary compenſation. The Crown has lately ſet a high example, by the ſale of many, if not moſt of its claims of this nature, at a fixed and moderate rate; an example which it is very deſirable may be enforced on all inferior lords, who indeed themſelves, it muſt be preſumed, in fact and law, hold only of the Crown. A curious inſtance of ſacerdotal ſelfiſhneſs on this head, occurs from Sir Thomas Smith's (ſecretary to Edward VI.) Commonwealth, b. 3. c. 10.; where he tells us, that "the holy fathers, monks, and friars had, in their confeſſions, and eſpecially in their extreme and deadly ſickneſs, "convinced

" convinced the laity, how dangerous a practice it was, for one " Chriſtian man to hold another in bondage: ſo that temporal " men, by little and little, by reaſon of that terror in their con- " ſcience, were glad to manumit all their villains. But the ſaid " holy fathers, with the abbots and priors, did not in like ſort " by theirs; for they alſo had a ſcruple in conſcience to im- " poveriſh and deſpoil the church ſo much, as to manumit ſuch " as were bound to their churches, or to the manors which " the church had gotten, and ſo kept their villains ſtill." Judge Blackſtone farther obſerves, on the ſubject of copyholders, that their eſtates, in ſtrictneſs, remain ſubject to the ſame conditions and forfeitures as before, though, in general, the villain ſervices are uſually commuted for a ſmall pecuniary quit-rent.

3. *Mill Sokes* now claim attention, under which the owner of a mill claims the right of compelling all the inhabitants of a manor to grind their corn at his own mill, to the entire excluſion of any competitor; thereby poſſeſſing a monopoly of that moſt neceſſary and lucrative operation, the grinding of corn, at a price or multure in ſome inſtances almoſt arbitrary; for appeals to courts of law are now, by one mean or other, ſo expenſive, as ſcarcely to deſerve the name of a remedy even when ſucceſsful. This ſoke has been ſeverely felt as a hardſhip, by ſome of the larger towns in particular, and involved the inhabitants in tedious and expenſive litigations with the proprietors of mills; in which it has not unfrequently appeared, that, by the increaſe of population, and the negligence of the millers, the people have been left without flour for many days together, to the ſerious inconvenience of their families, and under which inconvenience whole townſhips have long laboured without redreſs. It is true, that theſe mills, like many other things which are now juſtly conſidered as abuſes, had originally their uſe; having been formerly erected by the lord of the manor, for the uſe of the inhabitants thereof, who, being then in general his own tenants, may well be ſuppoſed to have been bound, and that equitably, to make uſe of no other mill than his own.

But the caſe is at this time materially altered in populous towns and diſtricts, where the lord of the manor, for a valuable conſideration, having long ſince alienated part or moſt of the lands to a great number of freeholders, may juſtly and reaſonably be conſidered as without any right to ſuch a monopoly over men who are no more his tenants, or of granting ſuch a right to any other to whom he may convey his property in the mill. This claim, or right, if it can deſerve ſuch an appellation, has long been, and ſtill remains, moſt fertile in grievous impoſitions, and almoſt intolerable abuſes, in many parts of the iſland; and, in reſpect to which, the very nature

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and conſtitution of a free country muſt and ought to find a remedy: For how can a conſtitution be defined, that redreſſes not the grievances of the people, nor protects its ſubjects from the vexatious impoſitions, unjuſt extortions, and feudal tyranny of a few individuals?

Many thouſands of pounds have been vainly ſpent in law-ſuits, on this very haraſſing cauſe. In the caſe of one very conſiderable manufacturing town in the county of York, the inhabitants appeared to have a near proſpect of emancipation from theſe *grinding ſhackles*, as they had ſucceeded in proving the inſufficiency of the mill to grind the quantity required; when, by a ſtratagem, (for ſtratagems occur in law, as in war), the plaintiffs put them off the ſcent, gained time, from the common procraſtination of the law, to rebuild the mill, and entirely defeated them. The proſperity of the town alluded to has been, however, materially affected, in conſequence of the above mentioned confirmation of the claim of ſoke.

4. *Waſtes, or Common Lands.*—Theſe will be found, on due reflection, ſubjects worthy of all the attention that can be beſtowed on them; and involving objects of the firſt importance to a nation, ſituated, like this, between an increaſing population, on one hand, and an inadequate ſupply of produce on the other.

In caſes of intended encloſures of the waſte or common lands, the lord of the manor uſually makes a claim on them to a conſiderable amount; which, being in ſome degree undefined, gives riſe to much altercation, difficulty, and diſcouragement, in that important work; ſo that the adjuſtment of his claim frequently raiſes an obſtacle which entirely defeats the plan of encloſure, ſo beneficial to the public, and leaves the whole in their old unproductive ſtate. For it is well underſtood, that the oppoſition in a committee of Parliament, which the lord of a manor generally has the power of raiſing, will be ſo far prevalent, as to leave the commoners little chance of ſucceeding againſt him. This, added to the uſual practice of appointing one commiſſioner out of two or three, together with the *tithes*, raiſe an almoſt inſuperable bar to the encloſure, and conſequently improvement, of a great proportion of the waſte lands in the iſland. The tithes are worſe, if poſſible; for the hatred of the commoners, in general, to that creeping abuſe, is ſo great and increaſing, that, between their averſion to them, when taken in kind, and the ſacrifice of a fifth to a tenth part of the waſte to their exonerations, they are rendered, in many inſtances, perfectly indifferent about any encloſure at all.

The caſe of the waſte lands in the manor of Hatfield, near Thorne, in Yorkſhire, is a proof of the above obſervations; where the commoners, after numerous and heavy expences, in

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fruitleſs endeavours to reconcile all jarring intereſts to the deſireable meaſure of encloſing ſome thouſands of very improveable land; after having ſo far ſucceeded, as to ſecure the uſual majority of common rights or claims; after having waved their objections to the payment of tithes in kind, in conſequence of the tithe-holder's refuſal of any terms of commutation; ſtill the exorbitant, and perpetually increaſing demands, of the agent of the lady of the manor, entirely defeated the whole ſcheme of this encloſure, which might have been the means of advantage and comfort to thouſands of families, not to mention its obvious public benefit. All theſe are given up to the avarice or caprice of an individual, and to the idea, ſtrongly inculcated, of the unlimited manorial power to oppoſe, with ſucceſs in Parliament, any application for encloſure. Is this law? or is it equity? No: but it is a cuſtom, and a cuſtom which, being deſtructive of the common right, and threatening miſery and famine to the community, demands an immediate alteration. Can any thing be more abſurd in law? Can any thing be more ſubverſive of every principle of political œconomy, than the very exiſtence of an undefined power in individuals to prevent ſuch plans of peculiar and obvious utility to the public, as encloſures of unproductive land in times like theſe, when, from various cauſes, the price of articles of the firſt neceſſity, the common produce of the country, is raiſed ſo high, as to be almoſt out of the reach of the lower claſſes of the community, and almoſt to portend the extinction of them, and their helpleſs offspring, by thouſands?

5. *Minerals*, ſuch as Coal, Stone, &c.—Some of the metals, as iron, lead, &c. are in many places claimed by the lord of the manor, and in nearly the whole of the waſte or common lands; ſometimes to the great injury of the owners of encloſed lands, and frequently of the community at large, by preventing the opening of collieries in convenient ſituations, by the enterprize of individual freeholders. Under this claim, when the lord of the manor takes into his head to bore, or to make trials, by digging, &c. in ſearch of coal or other minerals, he can enter property, and do what he pleaſes of that ſort, in ſpite of all oppoſition, even upon the moſt favourite and valuable ſpots, (houſe, garden, &c. excepted); and theſe frequently have been undermined, and almoſt ruined, while the owner is obliged to ſubmit to it for a compenſation, which, though the diſturber be liable to pay to the amount of the miſchief done, yet ſuch compenſation is too often much beneath a full, fair, and equal remuneration for the damages. This claim forms another prominent feature of that ſtern and tyrannous countenance, which, firſt by arms, and violence, and rapine, in the days of chival-

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ry; then by what was called law, and now by cuſtom and ſervility; manorial power has been enabled to aſſume, to the utter diſmay and abaſement of an humble, uſeful, and patient yeomanry.

6. Courts Leet, and Courts Baron,—to which all the male inhabitants of a manor, with ſome exceptions in favour of the clergy, &c. are deemed liable to attend, upon ſummons, for the purpoſe of paying rents or fines, performing ſuit and ſervice, homage, &c. inquiring into nuiſances, &c. chuſing juries, and for other matters pertaining to the manor, are ſtill regularly called in ſome freehold, and generally and frequently in copyhold manors, but at very diſtant intervals, *et pro forma*, in other freehold manors. But they are now of ſo little importance in themſelves, and have ſo little power to do either good or harm, that it is not worth while at preſent to dwell on them, further than to ſay, that their juriſdiction and powers are ſo completely abſorbed, by the Quarter-Seſſions and other courts of law, that their total extinction would by no means be felt as a loſs by any one, but the attorney-ſteward, who generally contrives to make the holding of manorial courts productive of ſome emolument to himſelf.

After due reflection on theſe ſubjects, the reader will perceive, that many things in the manorial, or feudal ſyſtem, though, as parts of ſuch a ſyſtem, they may have had their uſe in former times, are now, if not intolerable, yet very injurious abuſes in many inſtances, and in ſome almoſt deſtructive of the common rights of the people.

The power, almoſt arbitrary, of the lords of manors to prevent Encloſures; the Tithes, with large quantities of land in mortmain; the Entails, links of the ſame chain,—all tend to preſerve the monopoly of the very ſoil from which we derive our being, in the hands of a very limited number of proprietors; and thereby leave ſo ſmall a proportion of the lands in the iſland in a ſtate poſſible to be brought to market, though ever ſo deſirable to all parties, that the price of land, both in fee-ſimple, and in rent, has advanced, and is advancing ſo rapidly, as to be almoſt out of the reach of the moſt laborious and patient induſtry of the cultivator, and to baniſh the moſt diſtant hope of encouragement, from the poſſibility of becoming a freeholder in his turn; a hope ſo eſſential to be cheriſhed in every free ſtate, "the cheap defence of nations," the high reward of merit and uſeful induſtry, that induſtry by which we all live and breathe.

If the attention of the people were wiſely turned to their own concerns, means might be found quietly to remove all abuſes, of whatever nature; to eſtabliſh the ſacred rights of property, on her ancient, genuine, and liberal foundations; to give

give ſtability, action, and effect, to the rights and duties of mankind; and, moreover, to ſecure to all, peace, and ſmiling plenty, inſtead of war, famine, and peſtilence. Theſe bleſſed objects might be attained at leſs expence than that of a ſingle campaign, and I truſt will ſoon engage the ſerious attention of the Legiſlature.

Finally, it may plainly be demonſtrated by reaſoning, that the extinction or commutation, by ſome means or other, of tithes, manors, and entails, is abſolutely neceſſary in the preſent ſtate of population and induſtry; of which ſalutary object, a patriotic and independent Houſe of Commons will have no difficulty in the execution, whenever it ſhall, in its wiſdom, ſee it in the light of a proper, juſt, and neceſſary meaſure. *W. P.*

FOR THE FARMER'S MAGAZINE.

Letter from a Scots Farmer, who lately made a Tour through England, to his Friend in Edinburgh.

LETTER I.

THE queſtion, Whether travelling, or reading books, contributes moſt to the information of mankind?—has been often diſcuſſed, and plauſible arguments have been ſtated upon both ſides. Whatever ought to be the reſult of the queſtion, it is obvious that very few perſons have an opportunity of enjoying the firſt mode of inſtruction, while the other is within the reach of the greateſt part of mankind. If, therefore, thoſe who are favoured with a peruſal of the book of life, were generally to preſent the reſult of their obſervations to the public, it would be of material advantage to other claſſes, whoſe means of information are neceſſarily more limited.

During my late journey through different parts of Scotland and England, a journal was kept; wherein was marked down every thing of importance which occurred in converſation, or came under our inſpection. As you wiſh to ſee an abridgement of theſe remarks, I take the opportunity of a leiſure day to preſent a ſhort detail of our tour. You muſt not expect that I am either to deſcribe great men, or great houſes: No, theſe lay out of the ſphere of our obſervation. I will confine myſelf to a curſory deſcription of the ſtate of the country through which we paſſed, with occaſional remarks on ſubjects connected with its improvement. If this is in the ſmalleſt manner gratifying to you, the time beſtowed on this letter will be conſidered as well employed.

It is hardly neceſſary to ſay a ſingle word concerning the vicinity of your city, or the ſtate of the country within twenty miles thereof, as you are intimately acquainted with every part of

of it; but I cannot help remarking, that I was particularly ſtruck with the garden-like culture of Eaſt Lothian; which ſhews what may be accompliſhed by a ſpirited and independent tenantry. This diſtrict has long been famous in the annals of Scotland for ſuperiority in rural ſcience; and the appearance of the country ſufficiently proves that the preſent poſſeſſors are not behind their forefathers in profeſſional knowledge. It was here that Summer-fallow was firſt practiſed north of the Tweed; and, indeed, almoſt all our modern improvements were uſed by the cultivators of this favourite ſpot, before they were introduced into other parts of Scotland. I have at different times examined the huſbandry of England, and, with a few exceptions, can ſafely ſay, that it is not ſuperior to that of this ſmall, but fertile diſtrict. I wiſh moſt ſincerely that the proprietors may continue to cheriſh and encourage ſuch an active and uſeful claſs of men as the preſent poſſeſſors, by giving them ſuitable leaſes, upon fair and reaſonable terms; and am inclined to think, that a great deal of its preſent flouriſhing condition may be attributed to the liberal ſyſtem of connexion hitherto preſerved betwixt landlord and tenant; which has afforded to the one an extent of rent not exceeded in any part of Great Britain, while the other has not been depreſſed, nor limited in the means for cultivating and improving the ground to almoſt its utmoſt extent.

After paſſing Dunglaſs bridge, we entered the pariſh of Cockburn's path, in the county of *Berwick*, which is equally well cultivated with the conterminous country. That beautiful piece of architecture, the Peaſe-bridge, next came under our examination, which will be a laſting monument to the memory of the celebrated Henderſon. The old tower of Dunglaſs ſtands near the bridge; and here the Earl of Haddington and a number of the Eaſt Lothian gentry, were blown up by gunpowder in the year 1640. The circumſtance is mentioned by ſeveral hiſtorians; and I ſtate it here, with a view to correct an error in Pennant's Tour, which has remained hitherto undetected. This generally correct and well informed touriſt, deſcribes this melancholy buſineſs as taking place at Dunglaſs *upon Clyde*; which affords cauſe to preſume that in ſome caſes he did not collect his materials upon the ſpot, but took them from record, and that, in this inſtance, he was led aſtray by the ſimilarity of names.

The higher grounds which we aſcended after paſſing the Peaſe-bridge, can hardly be ſuppoſed ſuſceptible of any kind of improvement; and, till we arrived at the Preſs-Inn, the country within our view appeared a bleak and uncultivated waſte. From the Preſs-Inn to Berwick, the ſoil gradually turns better;

and round the village of Ayton, under the influence of a benign landlord, improvements are very far advanced. The gentlemen of Berwickſhire, to do them juſtice, are active and enterpriſing; and their endeavours, I am informed, have been well ſeconded by a reſpectable and intelligent tenantry.

Leaving Berwick, where there is a conſiderable fiſhing and corn trade, our road through the extenſive county of *Northumberland* preſented few objects capable of affording enjoyment to an agriculturiſt. The ſoil in general, contiguous to the great road, is below mediocrity; and the ſtate of cultivation diſplays ſtrong proofs that improvements are but yet in their infancy. This is exemplified by the circumſtance of almoſt every ridge remaining in its original crooked ſtate. The ſtraighting of ridges, though a hazardous and expenſive proceſs, is almoſt abſolutely neceſſary to the carrying on of improvements. Without it, a field can hardly be either properly ploughed, harrowed, ſown, or even reaped; and where crooked ridges prevail, it is a ſure ſign that cultivation is defective. No doubt an alteration ought to be attempted with the greateſt caution, and never but when the field is under Summer fallow. By repeated croſs-ploughings, gathering up all the hollow places, and frequent harrowings, the field may be completely levelled; and if a ſufficient quantity of hot lime is thrown in with a doſe of manure, the new ſoil will at once be brought into action, and no loſs ſuſtained.

Many parts of Northumberland are well cultivated, and the diſtrict of Glendale Ward, perhaps to an equal extent with any part of the kingdom. The coaſt ſide, or what is called Bamboroughſhire, has long been in a ſtate of aration, and probably was the firſt cultivated part of the country. About Alnwick, Felton-bridge, &c. and upon Tyne-ſide, there is likewiſe a conſiderable portion of good land, though large tracts ſtill remain in an unproductive and unprofitable ſtate.

I was much ſurpriſed to learn that one of the largeſt eſtates in the county was poſſeſſed without leaſes, and that the cottages thereon were all taken out of the farmers hands. The firſt practice is ſo cuſtomary among our ſouthern neighbours, that ſome excuſe may be allowed for it, though I am convinced it muſt militate greatly againſt the proprietor's intereſt; but the other is ſo novel, that I am at a loſs to imagine what reaſons influenced the noble proprietor to adopt it. Does not the greateſt part, if not the whole of theſe cottagers, receive their employment from the farmer, conſequently ought to be attached to him by every tie? Whereas, by ſeparating the houſes from the poſſeſſion of the ground, a different intereſt is reared up, which may prove prejudicial to the maſter, without adding to the comfort or advantage of the ſervant.

I have cauſe to believe, that the withholding of leaſes is meant to increaſe the political influence of the landlord; who thereby ſacrifices a part of his annual income, and injures the national capital, merely to promote a purpoſe, ſeldom beneficial to himſelf, and contrary to the ſpirit of the Britiſh conſtitution. It augments the number of votes in the hand of one man, and is juſt the ſame thing as if the proprietor was to poſſeſs the right of election, according to the extent of his eſtate. After all, it often goes for nothing; as two or three, or a greater number of freeholders, by a conjunction of intereſt, may be a match for the greateſt; and coalitions of this nature have not been unfrequent in this very county.

Newcaſtle is a throng, buſy place; much engaged in the coal trade, and, like all our old towns, built in a moſt inconvenient and confuſed manner. The collieries in the neighbourhood afford employment to an immenſe number of people; and if many fortunes are not gained in this line of buſineſs, yet great ſums of money are thereby circulated in the town and adjoining country. The town is almoſt ſurrounded by wind machines for grinding flour, &c.; and there is a large muir at the very gates, the diviſion of which has always been oppoſed by the *independent* burgeſſes.

From Newcaſtle to Durham, the road is exceedingly diſagreeable, as it is carried to a great height over Gates-Head-Fall; whereas, by turning round by the lower ground, it might have been made incomparably eaſier to the traveller, without much increaſing the diſtance. Similar inſtances of inattention prevail in many parts of the kingdom, particularly where roads were earlieſt made, and occaſion a heavy loſs to the trade of the country. Many people think that a ſtraight line muſt always be the ſhorteſt road, which certainly is the caſe when the ground is level; but in hilly and mountainous ſituations, the reverſe is generally the fact.

Durham is a moſt irregular built city, but well ſtocked with clergymen of all deſcriptions, who poſſeſs a large ſhare of territorial property in the neighbourhood. The biſhop is an amiable character; is very popular, from ſome recent inſtances of public ſpirit; and, I believe, well deſerves the large ſtock of worldly goods which has fallen to his ſhare. I have ſometimes attempted to aſcertain the uſe for which prebends and other dignitaries of the like kind were intended, but have conſtantly failed in the attempt. To me it appears, that the grant of a prebendary means the grant of a comfortable penſion, without drawing it from exchequer; and that religion is neither directly nor indirectly concerned in the tranſaction.

I noticed with pleaſure, to the northward of this place, ſe-

veral large fields, which were formerly in a ſtate of common waſte, now divided and encloſed, and improvements going rapidly forward. Paring and burning the ſward, ſeemed to be the great mean uſed for bringing theſe fields into a ſtate of cultivation; and I am inclined to think, conſidering the difficulty of reducing the turf, and the immenſe number of ants and grubs with which the ſoil is ſtocked, that ſuch a proceſs is the moſt effectual that can be deviſed. Theoriſts have often objected to this radical cure, becauſe, ſay they, it waſtes the ſoil; but practical men generally laugh at their fears, from a thorough conviction of the beneficial conſequences attending the operation in the firſt inſtance, which, under judicious management, ſeldom fails to procure at once ſuch a ſtock of manure, as to render the improvement ſolid and laſting.

Around Darlington, particularly to the ſouthward of the town, the ſoil is very fine; and here I diſcerned the firſt proof of the climate being improved ſince we left the vicinity of your metropolis. Every thing in the fields was hitherto far back in growth; the ear of the wheat was not ſeen, and the hedges had not, in a ſingle inſtance, ſhewn their bloſſom; but paſſing this place, the wheat ears were diſcovered burſting from the blade, and the hawthorn appeared in full flower. As we advanced ſouthward, I could not perceive any further alteration in the growth, either of hedges or grain, till we arrived within twenty miles of London.

Darlington is a clean healthy town, and diſcovers ſome marks of trade and manufactures. A great number of the people called Quakers reſide here; and, from their ſober appearance and regular demeanour, it is to be wiſhed that more of our countrymen belonged to that ſect. They ſhew their faith by their works; and, however formal and ſtiff their behaviour, in ſome reſpects, may be viewed by ſtrangers, their general conduct is ſuch as fully to juſtify me in ranking them as valuable members of the State.

The biſhopric of Durham is, upon the whole, a valuable diſtrict: a great part of it is encloſed, and in a very productive ſtate. I was informed the encloſures were chiefly made about the time of the Reſtoration, and, agreeable to the faſhion of the times, they are rather ſmall. The trees in the hedge-rows, though very ornamental to the country, are dangerous neighbours to the arable farmer, by preventing a free circulation of air; and the paſtures, from their age, cannot be conſidered as producing any thing like what the ground is capable of bearing, if it was renovated with freſh ſeeds. This muſt always be the caſe where the ſubſoil is not dry, and ought to influence the poſſeſſors to break up ſuch fields, which, after being properly diſciplined,

diſciplined by the plough, might be ſown down again with proper ſeeds, and a large additional quantity of graſs would be procured.

A great number of Engliſh landlords view the breaking up of old paſtures as a moſt miſchievous buſineſs, and abſolutely believe their property would be ruined, was this meaſure to be carried to any extent. Theſe apprehenſions muſt be produced by former inſtances of miſmanagement in the breaking up of graſs lands; for it muſt be confeſſed, that too many farmers adopt an erroneous ſyſtem in ſuch caſes. The firſt crop, which is uſually oats, will be good, if the land gets only common juſtice in the operations of ploughing and harrowing; but the goodneſs thereof tempts the farmer to ſow another white crop, and here commences the evil; for all old graſs lands are diſpoſed to run foul, and the riches accumulated for a number of years, give a decided encouragement to the growth of couch and other weeds. The crops of grain therefore fall off, and the land gets into the wildeſt and fouleſt ſtate. The ſure way of preventing theſe evils, is to give a complete Summer-fallow the ſecond year of ploughing, which will deſtroy the turf and the ſtore of weeds with which ſuch fields generally abound, and will bring them into a proper ſtate of cultivation for carrying heavy crops. Wherever this management has been adopted, I have never ſeen it fail; and it is the only one which can render the breaking up of graſs lands advantageous to the tenant, and not detrimental to the proprietor.

After leaving Darlington, we croſſed the Tees, a few miles to the ſouthward of that place, and entered the North Riding of York. We had ſome converſation with an intelligent farmer at *Northallerton*, the head town of the Riding, and were ſurpriſed to learn that wheat was preferred after clover, inſtead of oats, becauſe the latter is apt to make the ground run *wild*. Sowing wheat upon a clover ſtubble, is a very uſual practice in many parts of the kingdom; and the crop is certainly, in moſt caſes, ſuperior in value to oats, particularly in England: but, to ſuppoſe that oats contributed more than wheat to render the land foul, was what excited my wonder; for all land ſown in Spring muſt neceſſarily be cleaner than if it lay in a harrowed ſtate during the Winter months. Beſides, oats are a cloſe crop at the root, which wheat is not, and, being good foragers, thrive well on clover leas. Indeed, from comparative trials, it has been aſcertained, that, at the difference of one third in price, a crop of oats is equal in value to a crop of wheat, independent of the ſuperior condition in which the land is left for ſucceeding crops.

The land about Northallerton, and through the whole North Riding, till we arrived at York, is moſtly of an excellent qua-

lity; and the fields, with ſome exceptions, which happen everywhere, are in apparent good order. Perhaps too much of the land is in old graſs paſture; but ſtill the quantity under the plough is conſiderable. I ſhould ſuppoſe that it is capable of yielding very heavy crops of all grains; but the want of leaſes, and the reſtrictions impoſed upon the tenantry, are obſtacles to the exertions of the occupiers, which will always prevent agriculture from being carried on in a perfect manner. Unleſs a farmer has liberty to work the land he poſſeſſes agreeable to his inclination, it is impoſſible that he can farm with advantage. When he is inſecure in his poſſeſſion, and liable to be turned out by capricious ſummary warning, he is of courſe deſtitute of the great charm which everywhere ſets induſtry in motion, that is, the proſpect of reaping the fruits of the money expended in improvements; and when his powers of management are limited, he can only be conſidered as a tool to another perſon, who preſcribes directions for his government, which muſt be implicitly obeyed, whether they are agreeable to his judgement or not. I ſhould humbly ſuppoſe that theſe things have greatly contributed to keep the practice of huſbandry, not only in this diſtrict, but over all England, much more in a ſtationary poſition, than it would otherwiſe have been, had the farmer enjoyed the ſame diſcretion in the conduct of his buſineſs as is poſſeſſed by merchants and manufacturers. The latter claſſes have made much greater progreſs to perfection than the cultivators of the ground, who may be deſcribed as following, from one generation to another, the ſame beaten path.

The city of *York* occupies a greater extent of ground than many places of equal population. The river Ouſe is navigable here, and even to the diſtance of Ripon, in the Weſt Riding. I believe the city is a county of itſelf, and, together with what is called the *Ainſley*, unconnected with any of the three diſtricts into which Yorkſhire is divided.

There are no manufactures at York, at leaſt we did not hear of any; which is rather ſurpriſing, conſidering their extent in the weſtern and ſouthern parts of the ſhire. Perhaps the ground in the neighbourhood is too good for manufactures thriving upon, as it is well known they are generally moſt ſucceſsful upon barren ſpots. Shall I trace this to the bountiful direction of Providence, which uniformly influences the diſpoſitions of the people to ſuch works as is moſt conducive to general proſperity? Where the ſoil is good, and capable of producing ſubſiſtence in a plentiful manner, the inclinations of the great bulk of mankind are turned to rural affairs. Where it is inferior, and incapable of ſupporting a number of

inhabitants,

inhabitants, they are led to carry on manufactures, and are thereby enabled to purchase the necessaries of life from the cultivators of the ground. The one is fed by the productions of the farmer; while, on the other hand, the manufacturer prepares raiment, and many other things, for the comfort of those who toil and labour to provide the means of his existence. In this way, both classes contribute to promote the public good, without, after all, meaning any thing, themselves, but to promote their own private interest.

I dare say you will think the length of this letter sufficient for my first epistle; and as York is half way to London, and the place where travellers generally take a night's repose, I shall, in conformity to their example, drop my pen, and give you a respite till a future occasion. I am, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

STEPPING one day last Summer into your Parliament House, and observing a crowded auditory attending the pleadings, I anxiously inquired concerning the business on hand, as it seemed to be of importance, from the great number of lawyers reciprocally employed. Finding it was a process about mis-labouring a farm, I listened with attention to the pleadings on both sides, but was much at a loss to comprehend the nature of the obligations contained in the lease; particularly where the tenant was taken bound to keep the land in *Tath* and *Quend*, or *Querd*, for the Counsel did not read all one way. As I could not understand their meaning, it will be particularly obliging that you give this letter a place in your first Number, which I hope will induce some of your friends, skilled in the antiquities and ancient language of Scotland, to explain the import of these cabalistical and unknown terms. I am yours, &c. *No Antiquary.*

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

SPECULATIVE men have often amused themselves, by endeavouring to ascertain what proportion of the produce of land should be given to the landlord in lieu of rent; but these inquiries being generally founded upon theoretical principles, the result has seldom turned out agreeable to what practice would have dictated. While Mr Young thinks that one third is too much for rent, and that in most cases one fifth is sufficient, some landlords are not satisfied unless they get a full

half of the produce, and, according to the greateſt part of our modern leaſes, little more than that proportion may be conſidered as reſerved to the tenant for intereſt of his capital, ſtock, tear and wear thereof, expence of working the ground, and the ſupport of his family.

It is not my intention to enter upon a diſcuſſion of this queſtion at the preſent time, but to confine myſelf to a few curſory remarks upon the dangerous conſequences of increaſing rents too much, or, in other words, taking every halfpenny from the tenant which can poſſibly be got. Perhaps, nothing has contributed more to retard improvements, than the avaricious diſpoſition manifeſted by many proprietors, to increaſe their rents, and to prevent the tenantry from acquiring ſufficient capital for working the ground in a perfect manner. It is entirely owing to the fluctuating ſtate of capital, that improvements in agriculture have not kept pace with the arts and manufactures of modern times. Though, at firſt ſight, one would have been inclined to think, that as huſbandry is abſolutely neceſſary to the exiſtence of mankind, the practice thereof would have ſooner advanced to perfection than any other art, daily experience, however, may convince the moſt ſuperficial obſerver, that this is not the caſe; nor will it be otherwiſe, till the cultivators poſſeſs a greater power over the ſoil they occupy, and are provided with ſufficient means for undertaking all the different operations which belong to their complicated buſineſs.

It muſt be confeſſed, that for fifty or ſixty years paſt, theſe circumſtances have leſs applied to the low country of Scotland, than to any other part of Britain; and that a liberal ſyſtem of connexion has generally been maintained betwixt proprietors and tenants, the ſalutary effects of which are diſcernible to the dulleſt capacity. It is from an apprehenſion that a change is gradually taking place in the nature of this connexion, which muſt neceſſarily be detrimental to the public good, that theſe animadverſions are offered. A firm conviction of the unavoidable dangers which muſt follow the wreſting of capital from the tenantry, either by an exorbitant riſe of rents, or by impoſing arbitrary reſtrictions upon their management, which indirectly accompliſhes the ſame end, ſolely influences us, upon this occaſion, to ſtate the conſequences.

From tradition we are informed, that, after the acceſſion of James I. to the throne of England, the proſperity of Scotland ſuddenly declined, which was in great meaſure owing to the increaſed luxury of the landed intereſt requiring an augmentation of rents. At the concluſion of the laſt century, almoſt the whole capital employed in the cultivation of the ſoil was drawn from the tenantry, who were thereby reduced to the

greateſt

greateſt poverty. Fletcher of Salton, who wrote at that period, deſcribes them as ſunk into the moſt abject degree of wretchedneſs; and Lord Kames declares, that, before the Union, they were ſo *benumbed with oppreſſion*, that the moſt able inſtructor in huſbandry would have made no impreſſion. It is well known, that, betwixt the beginning of this century and the year 1750, landlords found a great difficulty in procuring tenants who could ſtock their farms, and ſecure them in payment of any rent at all; and that, when they found one of this deſcription, he got any length of leaſe he pleaſed. Theſe long leaſes, which at that time were univerſally granted, gave a ſpur to the activity of the tenantry, and, together with the growing proſperity of the country, enabled tenants to recover and increaſe their capitals. If theſe capitals are again wreſted from them, it does not require the ſpirit of prophecy to predict, that ſimilar conſequences muſt again take place; and that the kingdom, from a flouriſhing condition, will return to that ſtate of wretchedneſs and miſery in which it was before the Union.

We have a ſtriking inſtance of what neceſſarily accompanies a depreſſed huſbandry, in the preſent low condition of Spain. The proſperity of any country does not depend ſo much upon the quantity of gold and ſilver it contains, as it does on its internal induſtry, and the diffuſion of capital for carrying it on among all ranks of the State. Whenever, therefore, the capital of the huſbandman is diſſipated, the chain is broken, and, as in France before the Revolution, a luxurious landed intereſt, rich merchants, and monied men, opulent contractors, and farmers-general, may be found, while the face of the country lies uncultivated for want of capital, and the maſs of the people are reduced to the moſt abject condition.

Whether matters are in a train for bringing about ſuch a change in the ſtate of this country, we preſume not to ſay; but it is certainly true, that the great increaſe of rents and public burdens, and the augmented charge for every article of labour, muſt neceſſarily injure the tenant's capital, unleſs prices of every kind of produce riſe in an equal proportion. That this, for an average of years, has not been the caſe, we believe will not be diſputed; and that farmers have been able to go on, muſt be attributed to the ſuperior ſkill generally diſplayed in the management of rural affairs, and to the capital formerly accumulated, when rents, taxes, and labour, were comparatively leſs.

Under the preſent exorbitant rents, the greateſt part of tenants live in a conſtant dread of a fall in the value of produce, which, in a few years, would ſtrip them of their capital, and reduce themſelves and families to beggary. Nor can they have

the

the ſmalleſt aſſurance this will not be the caſe; for the riſe upon produce is occaſioned by the fall upon the value of money, the increaſe of trade, the proſperity of manufactures, and the wealth of Aſia, which is continually flowing into this country. But, reverſe theſe circumſtances.—Suppoſe trade and manufactures checked, and Britain ſtripped of her foreign poſſeſſions; corn would then rapidly fall in value, till it came to a level with the prices of other countries. Theſe things would, no doubt, ſoon find their level: in the mean time, the leaſeholder might loſe his capital, and be reduced from a ſtate of affluence to poverty and wretchedneſs.

It may be ſaid, Why does the farmer offer more rent than he is able to pay? We ſhall anſwer this queſtion, by putting another—Why do proprietors, in general, take ſuch methods of letting their lands? This is a moſt important ſubject, and to enter upon it now, would probably engroſs more room than you could conveniently ſpare in one Number. We ſhall therefore reſerve it, together with remarks upon ſome modern attempts to narrow the power of the farmer in the management of the ground, and to impoſe reſtrictions upon him, not formerly conſidered as neceſſary, for a future letter. In the mean time, with beſt wiſhes for the ſucceſs of your Magazine, I remain yours, &c. ARATOR.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Subſetting of Land.

GENTLEMEN,

I PERUSED your Proſpectus with a great deal of pleaſure, and rejoice that the nineteenth century is to be introduced with ſuch an uſeful publication. I truſt it is an evidence of the progreſs of knowledge, which is faſt ſpreading amongſt all ranks, and hope that you will experience a liberal ſupport from the cultivators of the ſoil, both in this and the ſiſter kingdom.

Among the benefits which our profeſſion will receive from a work excluſively devoted to their information and inſtruction, is the opportunity it affords of diſcuſſing every ſubject connected with rural economy. In Newſpapers, and Magazines of a miſcellaneous nature, theſe ſubjects were formerly overlooked, as people thought it unneceſſary to convey their remarks through ſuch precarious and neglected channels. Your publication, however, preſents a ſure road to attention; a circumſtance of particular importance to thoſe whoſe intereſt is affected by the ſubjects diſcuſſed.

Under this impreſſion, I beg leave to tranſmit you ſome obſervations

obfervations upon a queftion which I conſider as materially connected with the proſperity of agriculture in this and every other country: namely, Whether tenants ought to be allowed liberty of ſubſetting their farms, where they have not agreed to denude themſelves of that liberty? That they have not ſuch a right by common law, is a doctrine lately advanced, and I believe partially confirmed by a few deciſions of our Supreme Court; but, taking the matter in the abſtract, theſe deciſions, unſupported as they are by Statute law, cannot have further weight againſt the right, than merely what ought to be attached to the collective voice of an equal number of individuals of the ſame knowledge and information.

In the Agricultural Survey of an eaſtern county, highly celebrated for ſuperiority in rural ſcience, the learned and reſpectable perſonage employed to draw up the work, ſays, (p. 128. of the quarto edition), "It is now an underſtood principle at common law, that, unleſs the tenant ſhall ſtipulate this power, and that there ſhall be a ſpecial covenant to that effect in the leaſe, he can neither aſſign not ſubſet; or, in other words, if the leaſe ſhall be ſilent upon this point, the tenant has no ſuch power:" and he afterwards adds, that "the principles upon which this rule has been eſtabliſhed, ſeem to me to be grounded upon good ſenſe and ſound policy."

By the word *now*, in the firſt part of the quotation, it appears that this rule has been but lately eſtabliſhed, and that the law of Scotland was formerly interpreted in a different manner. But by whom has this alteration been introduced? Was it enacted by the Three Eſtates in Parliament aſſembled? No: but by the will of perſons who are themſelves proprietors of land, and who probably have imbibed old feudal prejudices, which prevent them from obſerving that ſuch a rule (for we will not call it a law) contributes to ſink the ſpirit of the tenantry, and to ſtop the progreſs of agricultural improvements.

Mr Erſkine, in his Inſtitutes of the Law of Scotland, ſeems to entertain a different opinion upon this point; and it is ſurpriſing that the Juriſdiction Act, which abolished the old feudal rule, that a vaſſal could not be received on an eſtate without the conſent of the ſuperior, did not alſo abolish the feudal clauſes in leaſes, prohibiting a ſubſet of land, or, in other words, do away the power retained by proprietors, to prevent any perſon from poſſeſſing land, whether they had their permiſſion or not; which is exactly ſimilar to the feudal rule, that a vaſſal could not be received without the conſent of the ſuperior. In this reſpect, the Ruſſian boor is ſuperior to the Britiſh farmer; for, according to the ingenious Mr Locke, it is perfectly indifferent to the owner of the eſtate, in what manner

leaſe

ner, and by what means, the boor procures his livelihood, ſo he do but regularly pay his *obrok*, or rent; and that, under this adjuſtment, the latter is in ſome ſort his own maſter, being free to diſpoſe of his activity, as well as of the ſhare of the ſoil committed to him. Were tenants in this country allowed in like manner to alienate their property, and to change their ſituation, they would certainly poſſeſs no more right than is already enjoyed by the reſt of the community.

But what injury would the landed intereſt ſuſtain from the exerciſe of ſuch a right? Would the rent be leſs ſecured, or the preſtations of the leaſe more imperfectly implemented, when the tenant alienated and diſpoſed his leaſe in favour of another? An unprejudiced perſon would rather be led to think that additional obligations would create additional ſecurity for the faithful diſcharge of the burthens originally contracted, as that any injury would be ſuſtained by the alienation of the leaſe, and the change of the tenant.

We come now to the remark—That the withholding a right to ſubſet is founded on good ſenſe and ſound policy;—and we may inquire, where the ſenſe or the policy of the refuſal is to be found. In no reſpect can the landlord's intereſt be injured; on the contrary, as already ſaid, it is additionally protected, by two or more perſons being concerned in the tranſaction. The refuſal, therefore, is rather an inſtance of a lack, than a proof of ſenſe; and as for the policy of withholding the right, it is equally undiſcoverable. It is obvious, that the majority of ſubſets would proceed from the inability of the original tenant to keep his poſſeſſion, or from a deſire to change his ſituation in life. In the firſt caſe, the farm cannot be properly cultivated; and in the other, the tenant may leave the premiſes under the management of a ſervant; againſt which practice, no law has as yet been eſtabliſhed. In both caſes, the property may be deteriorated, and at any rate it will not be improved; whereas, if a ſubſet had been allowed, a ſuperior tenant might have been procured, whoſe capital was ſufficient for the undertaking, and whoſe inclinations led him to follow after rural affairs. Again, in the firſt caſe, a perſon is obliged to continue in poſſeſſion till his affairs are totally embarraſſed; and, in the other, he muſt abide like a fixture upon the premiſes, or commit his affairs to the direction of others. Let theſe things be duly conſidered, and the impolicy of withholding the right contended for, will be clearly diſcernible.

Under every view of the matter, the landlord cannot be injured by the exerciſe of this right. It may be ſaid, he is entitled to chuſe his tenant; and that, by ſubſetting, he may get a diſagreeable perſon upon his eſtate. Theſe objections have

little

little weight; for, whoever is the tenant in poſſeſſion, the original leſſee is bound for the faithful obſervance of all the preſtations; and if theſe are performed, the landlord can have but ſmall concern with the occupant. Beſides, even under the ſtricteſt prohibition, the choice of a tenant is not in a landlord's power, while the leaſe goes to heirs-general, and it may run through as many hands in this way, as if it were permitted to paſs to aſſigns. Even the diſpoſition of the original tenant may change during the courſe of a tack, and a greater alteration of conduct may be experienced, than what would have proceeded from the introduction of a third perſon.

In a word, we conſider it as ſound and equitable doctrine, that, if a perſon has not renounced a right to ſubſet, he is, according to the principles of juſtice, upon which law is certainly founded, entitled to the exerciſe of that right. If, on the contrary, he has ſpecifically bound himſelf not to exerciſe it, he of courſe is not entitled to complain, as he has made a law for himſelf; but, upon the general queſtion, Whether it would be ſound policy to allow every tenant to alienate his leaſe, in the ſame manner as is done with every other ſpecies of property?—we are clear, that ſuch a liberty would not prove prejudicial to the landed intereſt, while the public good would be greatly benefited, and improvements forwarded with increaſed rapidity. I am yours, &c.

A Friend to Improvements.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Annual Charge attending a Plough and two Horſes.

GENTLEMEN,

EXPERIMENTAL Agriculture being an object of importance, I am glad to notice that you propoſe to pay it conſiderable attention. Having ſome reaſons to believe that the expence attending experiments is ſeldom juſtly aſcertained, I beg leave to ſend you a ſtatement of the annual charge of a plough and two horſes; which may ſerve a double purpoſe. It will ſhew the immenſe increaſe which has taken place in the price of labour, and aſſiſt thoſe who may tranſmit you the reſult of experiments, how to calculate the expence.

Annual

Annual Charge attending a Plough and Two Horſes.

Servants wages and maintenance -	L. 21	0	0
Corn for 2 horſes, from the firſt of October to the middle of June, 3 firlots per week, which, with odd feeds, may be taken at 30 bolls, at 16s. per boll - - - - -	24	0	0
200 ſtones of hay, to be eaten when the horſes are taken from green food, and betwixt yokings during feed time, at 7d. - - -	5	16	8
1½ acre of clover and tares for ſummer food	9	0	0
Smith and wright work - - - -	5	0	0
Saddlery work - - - -	1	0	0
Intereſt on capital ſtock at 5 per cent. * -	6	0	10
12½ per cent. on 70l. periſhable ſtock, for tear and wear - - -	8	15	0
Annual charge	L. 80	12	6

Now let us endeavour to aſcertain, from the above, what is the charge per acre to the farmer for ploughing and harrowing his land.

It will readily be granted, that 42 Scots acres per plough is as great a quantity as can be properly managed in ordinary caſes. If this extent is arranged agreeable to the common ſix-courſe ſhift, there will be 7 acres in Summer fallow, 7 in wheat, 7 in beans, 7 in barley, 7 in clover, and 7 in oats; and the number of ploughings and harrowings during the courſe will be,

1. Fallow,

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* The capital ſtock, ſo far as reſpects ploughing, may be reckoned as follows:

2 horſes - - -	L. 42	0	0
Plough, brake, and harrows -	5	5	0
Long and cloſe carts, with wheels and iron axle	15	0	0
Barrows, grapes, forks, &c. - -	0	15	0
Saddlery - - -	7	0	0
Servant's wages - - -	21	0	0
Horſe corn - -	24	0	0
Hay - - - - -	5	16	8
	L. 120	16	8

1. Fallow,	6 ploughings,	3 harrowings.
2. Wheat,		2 ditto.
3. Beans,	2 ditto,	3 ditto.
4. Barley,	2 ditto,	4 ditto.
5. Clover,		
6. Oats,	1 ditto,	3 ditto.
	11	15

Multiplying the above numbers by 35, the quantity of acres actually under tillage, and dividing the amount by 5, the number of breaks; the reſult will be, that two horſes, during the year, plough 77 acres once over, and give 105 double times of harrowing to one acre of ground. As their expence for that time is 80l. 12s. 6d., it may be claſſed as under:

77 acres once ploughed, at 18s. 3d.	L. 70	4	3
105 harrowings, at 2s. - - -	10	10	0
	L. 80	14	3

It will no doubt be attended to, that all the other operations performed by the man and the two horſes, when not engaged in ploughing or harrowing, are included in theſe charges; but as they are paid from the produce of the above quantity of land, and as theſe incidental operations are, in fact, work required upon the premiſes, it is deemed unneceſſary to ſtate them ſeparately, as this would not leſſen the ſum total of the labour-account. It therefore appears, that 35 acres of land, in a productive ſtate, and under a ſix-courſe ſhift, are laboured by the farmer at the expence of 80l. 12s. 6d., or 2l. 6s. per acre, independent of ſeed corn, graſs ſeeds, harveſt work, thraſhing, marketing, incidental expences, and the ſupport of the family.

In debiting a particular field for farm labour, I know of no better method, than firſt to aſcertain the ordinary outlays, then to reckon up the number of ploughings and harrowings given to each field, and, after finding how much that amounts to per acre, to proportion the expenee accordingly. If theſe rules are adhered to, the expence and profit of the farmer's operations may be as minutely aſcertained as the concerns of the merchant and manufacturer.

I need ſcarcely add, that every article in the annual expence of a plough and two horſes, is very moderately charged, being at leaſt one third below what they will amount to this year: For inſtance, the ſervant's wages and maintenance will be 30l., and the value of corn given to the horſes, in all probability three fifths more than the ſum charged.

I am, Sir, yours, &c.

December 6. 1799. *A Rural Economiſt.*

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

The neceſſity of Summer-Fallow, upon all clay ſoils, is well deſcribed in the Agricultural Survey of Yorkſhire; and I beg leave to tranſmit you a few Remarks made on that ſection of the Report, by a Landed Proprietor of that diſtrict, which you have leave to publiſh in your Magazine. I am, &c. N.

WHY does the farmer fallow more than the gardener? The firſt has worſe ſoils to contend with than the latter, and he has always leſs force, in proportion to his farm, than the gardener has to cultivate his garden: The latter can alſo generally command more manure; for he either is a market-gardener, near a great town; or a gentleman's gardener, having the care of his maſter's garden; he can alſo command a greater occaſional force. I do not think it proper to include, in this queſtion, ſmall gardens, belonging to farmers and ſmaller proprietors; for the ſmall ſize of ſuch gardens is in favour of my argument. Could farmers command, at a reaſonable rate, a force as ſuperior to the cultivation of their farms, as the gardener can in proportion to his garden, what number of ſervants and their families would they not maintain? and, ſtrictly ſpeaking, the whole country would be cultivated like a garden. But here, commerce, or, more properly, manufacture, interferes; and, by offering high wages, renders this cultivation impoſſible to effect, without a great advance in the price of the farm-produce. Here again commerce and manufactures ſtep in, and ſay, this muſt not be; we muſt be unfettered ourſelves, but it is for our benefit, *ergo*, for the benefit of the country, that the farmer ſhould be ſhackled; and the farmer, thus encloſed on all ſides in a circle, is obliged to fallow his ground, becauſe he cannot, by a great force, eradicate his weeds, and clean his ground, in a given time, as ſhort as that required to render fallows unneceſſary. To this may be added, the want of manure; and, even what takes place with the beſt farmers, and who have the moſt force, untoward ſeaſons, ſuch as the laſt, which on a farm, by preventing and poſtponing the work, ultimately diminiſhes the force. This very idle idea of not fallowing farms, has been taken from obſervations inaccurately made on the cultivation of gardens, without attending to the above circumſtances; and that almoſt every crop in a garden is drilled, or planted in lines, with ſufficient ſpace to admit ſometimes the plough or horſe-hoe, but always the hand-hoe. Obſerve, ſay the enemies of fallowing, how you act againſt your intereſt: Why, they never fallow in a garden: But more injury has been done by not fallowing, than any advantage which has been gained by continued cropping. Virgil, in his Georgics, commands worn-out lands to be fallowed for two years; and I have known land in this condition moderately manured, when made completely clean by a double fallow, make every farmer or labourer, who ſaw it, a convert to that mode of management.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

I beg leave, through the channel of your publication, to ſuggeſt the moſt productive method of ſowing *Tares*, when intended for ſeed; which is, to mix them amongſt beans when drilled, at the rate of one firlot of tares to one boll of beans. From trials made, it is aſcertained that the quality of the tares is vaſtly improved by being blended with beans, as, by clinging to the latter, they are kept from the ground, and enjoy the full benefit of the ſun, for ripening them in a perfect manner. They are in this way much eaſier harveſted than when ſown by themſelves. They anſwer, at the ſame time, for bands to tie the principal crop; and the produce may, on an average of ſeaſons, be conſidered as at leaſt double. As a conſiderable quantity of tares are annually imported into this country from England for ſeed, I am confident, if they were ſown in the way now recommended, that we could not only render this importation unneceſſary, but alſo be able to ſupply other diſtricts where they might be wanted.

It will be obvious, that when tares are intended for green food, there is no neceſſity for mixing them with beans. When ſuch is the purpoſe, they require to be ſown tolerably thick, ſo as the ſurface may be early covered; and if the ground is good, and recently dunged, an acre of them will afford as much *keep* for horſes and cows, as can be gained from a full clover crop; at leaſt I found them laſt ſeaſon fully as beneficial.

One material object procured by ſowing tares, is, that the farmer is never at a loſs for a ſufficient ſtock of *green food*, be the ſeaſon almoſt what it will. They alſo come in with great advantage betwixt the firſt and ſecond cuttings of clover, or when the latter fails, as was generally the caſe laſt ſeaſon. Indeed, thoſe farmers who were unprovided with tares, were at a great loſs for meat to their horſes, after the middle of Auguſt; and many had to reſort to their hay ſtacks, which is one of the cauſes why that article is ſo ſcarce. To attain the full benefit of this ſpecies of green food, the ſowings ought to be at different times, beginning the firſt as early as poſſible, ſo as progreſſive cuttings may be got, without allowing them to ſtand till over ripe, when horſes are not fond of them. In England, they have a cuſtom of ſowing Winter tares; but I am apprehenſive our climate will not admit of this practice; at leaſt, from ſome trials which have been made, expectations were diſappointed. At any rate, Summer tares may be got for food from the middle of July till the middle of November, and in favourable ſeaſons, even later.—I am, &c. *A Farmer.*

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

In this country, we are confeſſedly behind our ſouthern neighbours in the rearing of live ſtock; and I am apprehenſive our practice will not be improved, till greater attention is beſtowed upon the raiſing of green food, for ſupporting them during the Winter months. As matters are now carried on, the greateſt part of our cattle and ſheep are ſtarved during one half of the year; and, at that time, they neceſſarily loſe the fleſh which they had previouſly gathered, and, of courſe, at next graſs ſeaſon, are ſo weak and emaciated, that a conſiderable time elapſes before they are reſtored to their former condition.

Under theſe circumſtances, it will not excite ſurpriſe, that our breeding farms (at leaſt where cattle are the chief ſtock) are only capable of paying a very trifling rent, which would not be the caſe, were ſuitable induſtry uſed to procure Winter food. In the low parts of Scotland, it is well known, that, in nine caſes out of ten, young cattle receive little other ſuſtenance but what they get in the ſtraw yard, or from the pickings of barren moors; while in the Highlands, where the greateſt quantity is bred, they hardly receive as much ſtraw, or coarſe boggy hay, as will preſerve them alive. Hence, they are ſtinted in their growth, and prevented from arriving at any ſize, while the time for fattening them upon better paſtures is conſequently prolonged. Great loſſes are alſo ſuſtained by this procraſtination, which, added to the intereſt of capital, and the charge of ſo many years maintenance, renders the profit, when a ſale is made, very inconſiderable.

It appears to me that theſe circumſtances might be obviated, were due attention paid to what I have mentioned. It is certain that all the cattle in Scotland might be fattened for the butcher, after paſſing three years of age, and that their weight might be increaſed at leaſt one third, were Winter food provided for them. Where this is unattainable, it would be found good policy to introduce ſheep in their place. I know few ſituations where turnips may not be raiſed; and it is truly ſurpriſing what effects are produced from a very trifling quantity given to young ſtock. Their blood is thereby kept in a proper ſtate, and the conſtitution of the animal is in a manner prediſpoſed to receive more benefit from the dry food given alongſt with them. In ſhort, I hardly know a more beneficial way of uſing turnips, than applying them in this way; and, in a breeding farm, every object ought to yield to their culture, ſo far as it is practicable.

Almoſt

Almoſt every thing I have ſaid will equally apply to a ſheep-farm, though I have no difficulty in admitting, that the want of green food is attended with leſs loſs and inconvenience in the one caſe than in the other. Experience ſufficiently aſſures us, that a Highland farm is capable of paying a great deal more rent under the ſheep than the cattle ſyſtem; and the real cauſe is preciſely what is here aſſigned, to wit, that the firſt may be profitably kept without the aid of green food during the Winter; whereas, the other cannot be reared with advantage, unleſs ſuch collateral ſupport can be procured.

Hence it follows, that breeding farms, where green crops cannot be raiſed, ought to be applied ſolely to the ſheep huſbandry; and that the rearing of cattle ought to be confined to ſuch parts of the kingdom as are capable of producing a ſupply of food during every ſeaſon of the year. I am, &c.

VERUS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Beſt Food for Horſes.

GENTLEMEN,

HAVING ſome time ago obſerved a Publication advertiſed, intituled, "The Farmer's Magazine," a work which I hope will be equally creditable to you, and uſeful to the public,—I take the liberty of ſuggeſting a few hints reſpecting the food of our domeſtic animals; which, under the preſent circumſtances of ſcarcity, and the bad quality of every article of proviſion, may be attended with ſome benefit. In ſeaſons ſo unfortunate as the preſent, uncommon vigilance is neceſſary; the higheſt degree of which will be little enough to avert a very ſerious and widely extended calamity. Having made ſome obſervations upon the quality of proviſions in particular years, I lay the reſult before you. In late wet ſeaſons, the firſt evil ariſing from damp or unwholeſome grain, is a diſorder of the bowels, attended with gripes, looſeneſs, &c. which carry off many individuals of all deſcriptions; and, of thoſe that ſurvive, the aliment paſſes ſo rapidly through their bowels, that little of the nutritive qualities remain. To counteract this evil, boiling has been had recourſe to; and, to a certain degree, has had the effect of preventing gripes, and leſſening any immediate danger. The practice is, however, ſubject to one diſadvantage; namely, that of opening the bowels too much. There is another remedy, which, from experience, has been found more beneficial, not only for removing the griping and diſorder of the bowels, but at the ſame time in-

ſuring the greateſt proportion of nouriſhment to the animal; namely *kiln-drying*, which, when properly done, and the grain afterwards broke, affords, in any ſeaſon, a moſt valuable nouriſhment, particularly in ſuch a one as the preſent. I know it will be objected to by ſome farmers, on account of the bulk of the article, and the trouble and expence with which the drying and breaking ſo much grain would be attended; a trouble which, I confeſs, is conſiderable; but which will, upon trial, be found more than repaid by the attention recommended. A great proportion of both ſtraw and hay are this year exceedingly bad; and nothing but an uncommon degree of attention can prevent an evil, which at preſent appears to be a moſt extenſive one. I am, &c.

A Friend to Agriculture.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

The following valuable paper was tranſmitted by the Britiſh Conſul in Pruſſia, to the Lords of the Committee of Council for Trade, and obligingly communicated by Mr Chalmers, their Secretary, to Sir John Sinclair, Bart. As it belongs to a branch of Huſbandry which at all times has been viewed as of importance to the proſperity of Great Britain, I truſt it will readily find a place in your Magazine; in which caſe, ſome other papers of the like nature, received through the ſame channel, and now in my hands, ſhall afterwards be ſent you. I have only to add, that the public are infinitely obliged to Mr Durno for the trouble taken in drawing up ſuch an uſeful and ſatisfactory Report; which certainly deſcribes the Flax Huſbandry of Ruſſia, Poland, and Pruſſia, with the greateſt perſpicuity. I am, &c.

N.

Mr DURNO*'s Report concerning the method of cultivating Flax and Hemp, in Pruſſia, Ruſſia, and Poland; dated Berlin, 4th November* 1789.

As Mr Durno cannot be ſuppoſed *individually* to poſſeſs a competent knowledge of this ſubject, he thinks it neceſſary to premiſe, in order that the foundation on which the credit of his Report reſts may be known, 1*ſt*, That, for the purpoſe of obtaining the beſt information poſſible, he formed a chain of queſtions; and, availing himſelf of the advantage of an extenſive acquaintance throughout the interior parts of the countries in queſtion, forwarded theſe—not to the Learned, becauſe he could have expected from them only theory—nor to Merchants,

Merchants, becauſe they are accuſtomed to ſee theſe articles only in their *prepared* ſtate—but to *ſuch* country Gentlemen as have diſtinguiſhed themſelves moſt by their attention to the cultivation of their eſtates, and may therefore be ſuppoſed to have combined *practice* with *theory*, and conſequently to ſpeak from *experience* as to the reſult of *both*.

For further ſatisfaction, he annexes a tranſlation of theſe queſtions, with that of one of the returns thereupon received. On a general compariſon of which, the reſult appears to be,

1. That a black (not moraſſy) open gravelly ſoil, has been found to produce the beſt crops both of flax and hemp; and that, as they become too exuberant, conſequently *coarſe*, on a ſoil too rich, much care muſt be taken to reduce ſuch a ſuperior, as to raiſe an inferior or poorer ſoil to a middle degree of ſtrength, on which the *quality*, which is of much more conſequence than the *quantity*, that may be gained, wholly depends.

2. That the raiſing of *previous* crops of grain, on ſuch fields as are deſtined for flax and hemp, is, in general, practiſed as the beſt mode of aſcertaining this middle degree of ſtrength. On a vigorous ſoil, in the uſual manner cultivated, wheat is firſt ſown; then rye, barley, and oats; ſucceed laſt of all, either peas, flax, or hemp. Such lands bear two ſucceſſive crops of hemp, if intermediately dunged; and for one of flax, are not manured at all. But on a ſoil of leſs ſtrength, flax and hemp are ſown immediately after a Winter crop of rye, the field being ploughed up once, either in the intervening Autumn, if the weather allows, or, if not, in the Spring; harrowed over and manured; and then again ploughed immediately before ſowing. The diſadvantage of this, is however the leſs, if there ariſes any at all; becauſe a Winter crop of rye may be ſown in the ſame field again, immediately after drawing of the flax or hemp; if after a crop of hemp, *without*, but if after a crop of flax, *not without*, being again manured. A field that has lain fallow, if only ploughed up, yields a better crop of flax, than if cultured and manured in the above, or in any other way.

3. The uſual time of ſowing flax and hemp in thoſe countries, (which, though moſtly under the ſame parallel as England; that is to ſay, thoſe parts of them that grow the articles in the greateſt quantity and perfection, are ſo much colder in Winter, and warmer in Summer, and ſubject to ſuch inſtantaneous changes from the one to the other, that they can ſcarcely be ſaid to enjoy the temperature either of Spring or Autumn, night froſts being very prejudicial), is between the

25th May and 10th June, to the reaping, &c. of the flax in the end of Auguſt, and the hemp in the end of September: Hence it appears, that the flax is three, and the hemp about four months, in a ſtate of vegetation.

4. The difference, if any, between theſe two articles themſelves, as alſo, between them and barley, in reſpect to the degree to which crops of them impoveriſh the ſoil, is held to be very trifling; becauſe, as already obſerved (§ 2.), though no ſort of grain can be ſown immediately after a crop of flax, unleſs the land has been again dunged, yet after one of hemp, any other ſort, and even hemp itſelf, may be ſown without previous manuring. This *difference*, ſeemingly ſo material, would *yet*—(when it is, on the other hand, conſidered, that the field deſtined for a crop of hemp is, while that intended for a crop of flax, is not, previouſly manured; and that hemp, though it thus requires the aid of manure, while flax does not, kills or ſuffocates all ſorts of weeds;—thereby, in ſome meaſure counterbalancing, by the cleanneſs which it leaves, the greater degree of ſtrength which its vegetation may be ſuppoſed to require; and, *laſtly*, that neither article is ſuppoſed to impoveriſh the ſoil more than barley),—inſtead of being realized, ultimately reſolve itſelf into the eſtabliſhment of this very material fact, that flax and hemp may be, and are, cultivated in theſe climates, without any greater preparation or prejudice of the ſoil, if the farmer only ranks his crops according to its primitive ſtrength, that will ariſe, or be neceſſary, for the growth of any ſort of grain adapted to its then actual or temporary ſtate of cultivation; nay, even, that a ſoil which is foul, or infected with weeds, may, by a crop or two of hemp, be cleaned, and of conſequence greatly improved.

5. That hemp killing or ſuffocating (chiefly through its ſudden growth, and the excluſion of the free circulation of the air, occaſioned by the largeneſs of its leaves) all ſorts of weeds or undergrowth, there is no trouble of this kind with it; but that flax is, in general, weeded once or twice before it blooms.

6. That, in the ordinary courſe of cultivation, the flax is plucked, when the ſtalk has become yellowiſh, the pods brown, and the ſeed hard and full-bodied. It is then perfectly ripe, and the ſeed of ſuch crop is fit for the purpoſe of ſowing. But thoſe who refine, or are deſirous of gaining a ſuperior, or the fineſt poſſible quality of flax, from one and the ſame ſeed and field, pluck it earlier, viz. while the ſtalk is yet green, the pods only beginning to change colour, and the ſeed grains quite flat; and this being done before it is ripe, the hard of the flax

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proves indeed much finer, but the ſeed is ſacrificed, and fit for cruſhing only; and though the quality of the oil thereby produced is as good, the quantity is much leſs, than an equal meaſure of the ripe ſeed would have rendered.

The hemp is alſo pluckt or drawn, in the uſual courſe of cultivation, when the ſtalk and pods have turned colour, and the ſeed grains are become plump and hard, and not earlier on any account whatever. But thoſe who proceed ſyſtematically, and refine moſt on the quality of this article, make a diſtinction between the male and female, or ſuch ſtalks as do, and ſuch as do not, bear ſeed-pods, plucking the latter before the former, or as ſoon as the ſtalks *only begin to change* colour; and, at all events, keeping it ſeparate, as rendering a *finer* harl.

7. The ſeed, if the flax is very dry when pluckt or drawn, is *ſtript* off immediately; if not, after drying two or three days in the field; and, in caſe the weather will not admit of this laſt operation, the tops of the ſtalk, as far as the ſeed goes, are *cut* off. In either of theſe three caſes, the ſeed and pods are immediately ſpread out as thinly as poſſible on a floor, through which the wind has a free circulation, there turned over twice every day, until ſo dry, that the pods open of themſelves, and are then thraſhed out and cleaned in the ſame manner as the different ſorts of grain.

For gaining the *hemp ſeed*, the hemp itſelf, as ſoon as pluckt or drawn, is ſet up upon its root-ends againſt the wall-palings, or other ſuch places as, according to the weather, are moſt convenient, until perfectly dry. The roots and top-ends, as far as the ſeed goes, are then cut off; the former thrown away as uſeleſs, and the latter thraſhed out and cleaned immediately.

If the ſeed of either is ſuffered, inſtead of being immediately cleaned, to remain for any length of time in a foul, moiſt ſtate, its colour is thereby ſpoilt, and even its ſubſtance ſo much injured or reduced, that it cannot be employed for ſowing; and, when cruſhed, produces, not only a leſs quantity, but alſo a worſe quality of oil, than it would otherwiſe have rendered.

8. As ſoon as the ſeed has been gained in the manner above deſcribed, both the flax and the hemp are immediately put into the ſteep, ſo carefully ſunk, as that no part of them may remain above the ſurface of the water; and there keep the flax until it diſjoins itſelf from the rind, and the hemp until the harl ſprings from the ſtalk.

If the weather is warm, and the water ſoft, nine or ten days may be ſufficient for that purpoſe. In hard water, and cold weather, from fourteen days to three weeks are generally requiſite; ſtagnant is preferred to running water, not only

as it produces the ſame effect in leſs time, but becauſe running and ſpring water make the harl red and towey: And large bodies of ſtagnant water are preferred to ſmall, becauſe they have been found to give a whiter or cleaner colour: But fiſh-ponds muſt be avoided, becauſe the fiſh would be thereby deſtroyed; as alſo ſuch places as cattle are watered at, if they are ſo ſmall as that the whole maſs may be thereby impregnated, becauſe ſuch water is held to be both unwholeſome and unpalatable for them.

Of the different kinds of bottoms or ſoil, on which ſuch pieces of water ſtand, the muddy or ſlimy is preferred, and ſuch only as are particularly prejudicial avoided, being either moraſſy, from being metallic, or appearing to contain cold ſprings.

In the ſouthern provinces of Poland, as Volkinia, Podolia, &c. which have the beſt ſoil and climate for the production of theſe articles, but which, for want of a water-communication with the Baltic, have been hitherto leaſt cultivated, the mode of ſteeping is not practiſed at all, on the ſuppoſition that the harl is thereby weakened, and the colour darkened. But when it is obſerved, *on the one hand*, that ſteeping can only have ſuch pernicious effects when injudiciouſly or improperly managed; as, for example, by uſing hard inſtead of ſoft water, or letting it lye too long in the ſteep; and, on the other, that, when dried, inſtead of being ſteept, it is impoſſible to ſeparate the harl from the rind of the flax, or from the ſtalk of the hemp, without breaking, conſequently without ſhortening it; nor with ſo little labour; conſequently at ſo ſmall an expence (that of the ſteeping taken into the ſcale), as if it had been *watered* inſtead of being *dried*---there ſeems to be leſs doubt of the mode of ſteeping being preferable, ſince it is, in the climates in which theſe articles are cultivated of the beſt quality, and to the greateſt extent, almoſt univerſally practiſed; and that the method moſt generally adopted cannot but be ſuppoſed to be the beſt.

9. After being taken out of the ſteep, and ſtanding a few hours on end, to let the water run off, the flax is ſpread out on a graſs field, where it cannot touch the earth, 14 days on the one ſide, and 14 days on the other, then gathered together, ſet up in ſmall ſtacks, and there left ſtanding until perfectly dry; but the hemp, inſtead of being ſpread out on a field, is ſet up againſt the walls or palings, until it is likewiſe quite dry; and then both are houſed in ſuch ſituations, as to be expoſed as much as poſſible to a free draught of air; but neither to any the leaſt wet from without, nor dampneſs from within; becauſe ſo much of them as might ſuffer from either

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the one or the other, would be quickly rotted, beſides having a tendency to ſpread and infect the reſt, the more and the farther, the longer it might remain undiſcovered.

A continuation of rainy weather, during this operation, is rather unfavourable, but ſeldom or never productive of any material loſs; *becauſe* leſs time of *ſuch*, than of dry weather, is ſufficient for effecting that preparatory degree of mortification thereby intended, or which is neceſſary for completing the diſjunction of the hard from the ſtalks, rinds, or ſcales; the lying in this ſituation a few days longer than is abſolutely neceſſary, not being prejudicial, and the opportunity of *one fair day* only, ſufficient for the purpoſe of houſing. The needy peaſant ſets about dreſſing as much as poſſible immediately, in order to turn it into caſh, for the payment of his Michaelmas rent; but the man of ſubſtance does not think of this, until he has firſt put his Winter ſeed into the ground, and finiſhed all his out-of-door, or field work.

10. The manner of breaking and cleaning, as well as the forms of the inſtruments therein employed, being ſuppoſed to be the ſame all over, and the ultimate difference to conſiſt only in the degree to which the cleaning is carried, a particular deſcription of either ſeems to be ſuperfluous.

If the weather is clear and warm, the heat of the ſun proves ſufficient for effecting the firſt part of the operation, (viz. *of ſoftening the hard, and ſpringing or ſplitting the ſcales*); but if it is not, a room, moderately heated by an oven or ſtove, muſt be had recourſe to; and every peaſant, in the practice of cultivating any quantity, either of flax or of hemp, has an apartment for that particular purpoſe.

11. However much may depend on the judicious management of theſe eſſential points, it is nevertheleſs to be obſerved, that the great *difference* of *quality*, diſtinguiſhed by the names of the ſeveral provinces, countries, or eſtates, in which they reſpectively grow, do not ariſe from the variety of the quality of the ſeed, or from that of any other circumſtances than the ſoil and climate; and that the utmoſt exertions of knowledge and induſtry, can therefore only to a certain degree *improve*, but never effect an abſolute *change* in the *quality*, known to be the produce of any particular province, country, or eſtate; ſo far as that the beſt of the one can never be brought to equal the beſt of the other, although ſituated under the ſame latitudes.

12. It is generally underſtood that the cultivation of flax and hemp is more profitable in theſe countries than that of any ſort of grain.

Suppoſing a piece of ground put into the uſual ſtate of cultivation for bearing a crop of hemp, the other crop, which it would

would be moſt fit to carry, being barley or peas, the calculation would ſtand thus: 4 ſheffels of hemp ſeed would produce, on an average, 10 ſtone of hemp, valued at 6 f. - F. 60
8 ſheffels of ſeed, valued at 3 f. - - 24

Making together, Pruſſian money - F. 84
And deducting the ſeed ſown, being 4 ſh. at 3 f. - 12

would leave groſs produce - - F. 72

On the ſame piece of ground there might be ſown 3 *ſheffels*, producing a crop of 15 ſheffels of barley, valued at 3 f. F. 45
deducting the ſeed, 3 ſh. at 3 f. - - 9

would leave groſs produce - - 36

On 2 *ſheffels of peas*, producing a crop of 12 ſheffels, valued at 4 f. - - - - - 48
and deducting the ſeed, 2 ſh. at 4 f. - 8

leaves groſs produce - - - F. 40

So that, in the groſs produce, there would ariſe a minus on *barley* againſt hemp, of 36 f. in 72 f.; and on *peas* againſt hemp, of 32 f. in 72 f.; being about 50 *per cent.* on the former, and 44 *per cent.* on the latter; the tow of the hemp being allowed againſt the ſtraw of the barley and peas.

It is indeed true, that the farmer, individually conſidered, does not gain the whole, nor, perhaps, any thing more than a very ſmall proportion, of this groſs ſurplus, the greater expence of cultivation and dreſſing, conſuming the reſt; but it ſeems no leſs obvious, that, whatever may be the proportion which remains to him as a nett profit, the whole of the groſs ſurplus, if the matter is conſidered in a national point of view, falls to be placed to the credit of the public; in as far as, whatever the farmer gains leſs than the ſum total of the groſs ſurplus of the value of *the one article* above *that of the other*, conſiſts in money paid for the extra or greater expence of cultivation only; that is, in money paid for hand-labour in the proſecution of an operation which, at the ſame time that it obliged him to hire, enabled him to pay a greater number of induſtrious people than he would otherwiſe have either wanted, or been able to maintain; and if the acquiſition of this ſurplus would be an object of importance, ſuppoſing it to ariſe on the difference of the value of two articles of our *export*, how much *more ſo* is it not, when, as in the preſent caſe, it would ariſe from the cultivation of articles, without which, neither our marine nor manufactures can ſubſiſt, and for which we would otherwiſe be obliged to depend on others, in as far as we

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muſt *import*, to the extent of whatever our manufactures or conſumption exceeds our *home* growth, from *foreign* countries, at leaſt at the ſame, if not at a yet greater expence, than the groſs ſum at which the valuation is here ſtated? And if ſuch an accumulation of ſimilar operations be ſuppoſed to take place, as to extend itſelf all over the nation, to what a degree might not its population be carried, ſince the population of any given ſpot, or country, naturally depends on, or is in proportion to, the means of ſubſiſtence which it affords; of conſequence, its manufactures, trade, and revenue, are in the ſame ratio?

It may be indeed objected, that grain, as the firſt and grand neceſſary of life, ought to be the firſt object. But this poſition ſeems only allowable, when combined with certain local circumſtances, and particularly when it *is taken for granted*, that the cultivator is ſolely and abſolutely dependent on the growth of the identical ſpot on which he lives, or of his own lands, for his daily ſubſiſtence; as may be ſuppoſed to have been the caſe of Adam and his family, in the primitive ſtate of man; or that would be the caſe of England, or of any other iſland, abſolutely ſecluded from all communication with other people or countries; becauſe, *if the contrary is admitted*, that is, that the individual, conſequently any given number of individuals, as compoſing a nation, may as eaſily, in the concurrence of reciprocal wants, or at a market, buy any given proportion of corn, as of wool, flax, or hemp, the *chief part* of what *he eats*, is the *whole of that material without which* he cannot earn his bread. We need only farther ſuppoſe, what experience has aſcertained to be a matter of fact, viz. that the general or average produce of thoſe parts of our hemiſphere, which lay within the compaſs of ſuch an intercourſe or exchange of reciprocal neceſſaries, is equal to its general conſumption, in order to find reaſon to conclude, that that maxim, though applicable in ſome, does not apply to all ſituations; and that, though it ought not to be loſt ſight of in any caſe, it may, under ſome circumſtances, be carried to a prejudicial degree; and particularly in ſuch a caſe, when the economiſt, who has the choice of cultivating any *one* of *two* articles, *both* of *which* he *muſt* have, does not, from prejudice, or other motives, prefer that which would render (or, which is exactly the ſame thing, would coſt him) *the moſt money*: For who, to ſubſtitute another compariſon, foreſeeing that he will want both wheat and oats, and having a piece of ground on which he can grow *both*, or *either*, would not ſow wheat only, and take his chance of being able to lay in the oats, and to gain a ſurplus with the exceſs of the value which the wheat

wheat crop would render, above that which a crop of oats would have produced? If ſuch is the caſe, conſidering the ſubject in a theoretical point of view, the only doubt that remains, in reſpect to the practical application thereof to the object of the preſent report, may be reduced to this ſimple queſtion, Whether England, in particular, is in the firſt or the laſt of the two ſituations above deſcribed? Since, if it is actually in the laſt, there would then remain no doubt, that the cultivation of flax and hemp, as two articles which, if we do not grow, we muſt import, may and ought, to a certain degree, be countenanced or encouraged, in preference even to that of corn; or, at leaſt, affords ſo great a probability of the truth of this concluſion, as to recommend the ſubject to the inveſtigation of perſons of ſuperior knowledge.

13. Be this as it may, certain it is, that, in ſome countries, and particularly in Weſt Pruſſia, the peaſants are not allowed to cultivate either flax or hemp, until they have firſt ſown a ſufficiency of corn for their own conſumption; while no traces of any encouragement, given by either of them, are to be found; theſe governments, it would ſeem, entertaining an idea, that there is a ſufficient, if not even too great an encouragement or temptation, to prefer theſe articles to corn, ſimply in the ſuperior profit ariſing from the comparative produce of their crops.

Allowance is, however, to be made for this material circumſtance, that, in thoſe countries, the peaſantry are yet in a ſtate of bondage, either actual or *conſequential*, and therefore without any other ſtimulus to induſtry, or even to provide for their own perſonal ſuſtenance, than what proceeds from a fear of either ſuffering actual want, or corporal chaſtiſement.

Berlin, 14th Nov. 1789. JAMES DURNO.

TRANSLATION.

Queſtion 1. What ſoil is deemed beſt for growing of flax or hemp?

Anſwer. Flax and hemp will grow beſt upon a middling ſoil, as they become too exuberant when the ſoil is rich; and a ſandy ſoil, particularly if the ſeaſon be dry, has not ſufficient power to mature them; but ſtill the ſame ſoil does not, in every diſtrict, produce the ſame crop. It has been found, that the Oberlands ſeed, ſown in Lithuania, in the ſame ſoil it ſprang from, degenerated the third year; on the other hand, Lithuania ſeed ſown in Oberlands, improved, and produced, the third year, a crop equal to the beſt Oberlands.

Q. 2. When is the beſt time to ſow flax and hemp?

A. In Oberlands, they ſow flax and hemp in the beginning of

of June, and pick it about the beginning of September, according as the ſeaſon proves favourable, or otherwiſe.

Q. 3. What grain, on the ſame land, is generally ſown immediately before or after flax or hemp?

A. If flax and hemp be not the chief object of cultivation, and the ſoil in its full vigour, it is cuſtomary, in Oberlands, to ſow firſt wheat, then rye, barley, oats, peas, and then flax or hemp, the laſt on the ſame piece of land; becauſe the plucking up of the roots tenders the ground, and prepares it for the manure. It is with this view alone, that flax or hemp is ſown the laſt; for it is not ſuppoſed their cultivation impoveriſhes the land more than any other grain, as, after the crop of flax, the ground is manured with common dung, and is thus prepared for whatever ſort of grain may be wanted.

Q. 4. How is the land manured for flax or hemp?

A. As agriculture is here not purſued very ſcientifically, if the land requires manure in general for other grain, the ſame is uſed for flax and hemp.

Q. 5. What grain impoveriſhes the land moſt, and how muſt it be treated after a crop of flax or hemp?

A. This ſeems difficult to determine, though it may be obſerved, that barley can only be ſown twice on the ſame land without manure, but other grains oftener; and when any preparation is requiſite, the management of the land is the ſame for flax or hemp as for other grain.

Q. 6. When, and how often, ought the flax and hemp to be weeded?

A. It is not adviſeable to weed either flax or hemp at all, as too much is deſtroyed in the operation; therefore, the beſt method is, to be very careful in cleaning the ſeed.

Q. 7. When ought flax or hemp to be pulled?

A. When the ſeed is fully ripe; as flax or hemp, pulled in the bloom, gives a weak unſerviceable harl.

Q. 8. Can the ſeed be collected in pulling the flax or hemp, or muſt it firſt be dried?

A. So ſoon as the flax or hemp is plucked, the ſeed pods are cut off, and left on the field to dry, and are afterwards thraſhed and cleaned.

Q. 9. When muſt the flax or hemp be laid in water? How long ſteeped? And why is ſtanding water preferred to running water?

A. Immediately after the pods are cut off, the flax or hemp muſt be hurried into the water, and there lye entirely covered. If the weather be hot, and the water ſoft, nine or ten days are ſufficient; but, in ſpring water, and cold weather, it may be three weeks ere it be ready; but by no means let

it

it be put into running water, as this makes the flax red and towey. Ponds, however, may, in caſe of need, be filled from a river or ſtream; but ſo ſoon, or rather before, the flax or hemp is in, the communication muſt be ſtopped, and no freſh water admitted. It muſt be remarked, that the water in which flax or hemp has been ſteeped, is of no more ſervice for that year, and fifh ponds muſt be avoided, as it will kill all the fifh. Flax, put into large bodies of ſtanding water, as lakes, generally turns out the whiteſt.

Q. 10. Is it immaterial on what ground the ponds are?

A. Moraſſes and ſprings muſt be avoided; otherwiſe the ground, where the ponds are made, is immaterial.

Q. 11. How long muſt it dry in the field? Can it in this ſituation be ſpoiled? And is this danger not to be avoided?

A. If the ſeaſon be dry, three weeks will ſuffice; but if there be continued rains, the whole is ſpoiled, and no remedy.

Q. 12. Is it prepared directly? Or, if not, where, and in what manner is it kept?

A. If time permits, it can be immediately prepared; otherwiſe, provided it lies only dry, it may wait your convenience.

Q. 13. How is it prepared for ſale?

A. Before it be broke, it is put into a room gradually heated by ſtoves, and, when ſufficiently criſp, it is taken out and broken on a wooden machine made for that purpoſe, and then ſwingled and cleanſed proper for ſale.

Q. 14. Why is the preparation through ſteeping preferred?

A. Becauſe it produces more flax, ſtronger harl, and better colour; for it is ſuppoſed the linen worked up from unſteeped flax never can be well bleached.

Q. 15. How many feet ſquare are required for ſowing ſix ſheffels of lintſeed, and how are the profits of theſe ſix ſheffels calculated?

A. Six ſheffels of lintſeed ſuffice for about five morgan-land, or 67,500 ſquare feet culm, the land meaſure here, which is computed to be nearly 60,000 ſquare feet Engliſh meaſure. The Pruſſian peaſant makes no calculation of his profit on theſe five morgans, until the produce be ſold.

Q. 16. What is deemed moſt advantageous to be ſown in the land of the ſame extent, and prepared in the ſame manner as is requiſite for ſowing theſe ſix ſheffels of lintſeed?

A. As it is already obſerved, in the third article, that flax is ſown upon land which has been already uſed; therefore, ſuch land is only proper for oats or flax, of which two it may be preſumed that flax will yield the more profit.

Q. 17. Is the Pruſſian peaſant allowed to cultivate as much flax as he pleaſes?

A.

A. The Pruſſian peaſant is not allowed to cultivate flax, until he has ſown a ſufficient quantity of corn for his own conſumption; and the further uſe of his own ground then depends upon himſelf.

Q. 18. Is flax cultivated every where in the ſame manner?

A. Flax is cultivated and prepared in the ſame manner throughout Pruſſia, and made quite ready for ſale, by the peaſant alone.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

If the following Obſervations upon the Climate of Eaſt-Lothian appear worthy of notice, you are at liberty to inſert them in your Magazine, I am, &c. *A. B.*

THERE is perhaps no diſtrict, of equal extent, in the united kingdom, in which the climate is ſo various, as in the county of Eaſt-Lothian: From the ſea-coaſt to the Lammermuir hills, a diſtance of only 13 or 14 miles, all the different ſhades of climate, generally met with in the north of Europe, are experienced.

This variety is evidently owing to the elevation of the land, in different parts, above the level of the ſea: From the ſouthern boundary of the Frith of Forth, the country riſes towards the Lammermuir hills, not in a gradual ſlope, but in a ſort of ridges, running nearly parallel to each other, in a direction from weſt to eaſt: Each of theſe ridges poſſeſſes a climate in every reſpect ſuited to its altitude; thoſe neareſt the hills being colder, and the ſeaſons later, than ſuch as are leſs elevated and nearer the ſea; while the vales, or intermediate ſpaces, enjoy, with little variation, the ſame climate and ſeaſons as the open flat part of the county.

But though the actual degree of heat, as meaſured by the thermometer, in the different parts of Eaſt-Lothian, will be found to correſpond pretty nearly with this deſcription, there are other circumſtances to be taken into the account, which have a very conſiderable influence upon the climate; ſuch as the prevailing winds, and the figure and ſituation of the moſt elevated lands: this laſt may indeed be ſaid to regulate, in a great meaſure, both the violence of theſe winds, and the quantity of rain that falls in different parts throughout the year.

From December till May, the winds are variable, chiefly from eaſt to north, and moſt of the rain and ſnow that fall during that time, are from theſe quarters, with occaſional

ſtorms

ſtorms from the north-weſt. Towards the beginning of May, the ſea-breeze ſets in from the eaſt, and, in ordinary ſeaſons, continues with very little interruption till the end of July or beginning of Auguſt: During that period, contrary to what happens for the remaining part of the year, the eaſt winds are generally attended with dry weather, a circumſtance of conſiderable importance to the eaſt part of the county. From the beginning of Auguſt till the end of Autumn, the winds vary from the weſt, to ſouth and ſouth-eaſt; in which laſt quarter, they are for the moſt part attended with rain or foggy weather, and often occaſion much perplexity and loſs to the farmers during harveſt: But the heavy gales that happen in Auguſt and September, are moſtly from the ſouth-weſt.

It has been obſerved, that the land riſes from the ſea towards the hills, not in a regular or gradual ſlope, but in ridges, moſt of which (with the exception of Garleton hills) commence near the weſtern extremity of the county, and are continued eaſtward for many miles. The northermoſt ridge, forming a part of the ſea coaſt, commences on the eaſt ſide of Aberlady, terminates at North-Berwick Law, and comprehends the whole of the lands to the north of the vale of Peſſer. The intermediate ridges between that and the hills, terminate a conſiderable way inland, with the exception of that which forms Drumbender Law, and which runs much farther eaſt than any of them.

By means of theſe terminations, a very valuable, as well as extenſive plain, is formed on the eaſt part of the county, the extreme boundary of which is the Lammermuir hills on the ſouth, and North-Berwick Law on the north. This figure of the county has a conſiderable effect, not only upon the winds, and the quantity of rain that falls during the year, but alſo upon the productions of the earth. It has been obſerved, that the prevailing winds, during the Summer months, are generally from the eaſt; and that eaſt winds, at that ſeaſon, are, for the moſt part, attended with dry weather; any rain that falls during that time being from the weſt, owing to the circumſtance of a part of the clouds, coming from that quarter, being attracted by the high lands at the weſtern extremity of the county, and divided in ſuch a manner, as to ſend them off in two different directions, one towards the Lammermuir hills, the other taking the direction of the Frith of Forth.

The remaining clouds which eſcape theſe heights, continue their courſe to the eaſtward, till they meet with Garleton-hills, Kilduff, and Drumbender Law, where, owing partly to the attraction of theſe hills, and partly to the ſea-breeze from the eaſt,

eaſt, which they then encounter, they are ſent off in a triangular direction, one part being carried towards the Frith of Forth, and the remainder to the Lammermuir hills; along which they are carried till they reach Dunglaſs, where they empty themſelves into the ſea.

The figure of the eaſt coaſt of Scotland contributes greatly to the uniformity of the ſea-breeze in the county of Eaſt-Lothian. The high land of St Abb's Head, on the ſouth, and the Fife hills, on the north, form a bay of great extent; into which the wind, from the eaſt, enters, as into the mouth of a large funnel. This current of air, in its progreſs weſtward, is gradually confined by the contraction of the country; and, when it reaches the coaſt of Eaſt-Lothian, is divided into two ſtreams by North-Berwick Law, and the ridge that runs weſt from it; one of which takes the direction of the Frith of Forth, and the other blows over that extenſive plain which forms the eaſt part of the county.

As the current proceeds to the weſtward, it is gradually confined within a narrow ſpace: in that way, its velocity is ſo much increaſed, that when it encounters the clouds from the weſt, it has acquired a degree of ſtrength ſufficient to alter their direction, and prevent their further progreſs towards the eaſt. Owing to this cauſe, very little rain falls in the eaſt part of the county during the Summer months; a circumſtance that has often tantalized the farmers in dry ſeaſons, when they had long expected rain with much anxiety, and flattered themſelves with the near proſpect of it; a diſappointment which, though it has by ſome been conſidered a ſerious misfortune, deſerves to be viewed in a different light. In fact, the want of rain, to a certain degree, in that part of the county, is productive of advantages that are not very generally underſtood; as the ſuperior quality of the grain raiſed there, is owing, in a great meaſure, if not entirely, to its growing and coming to maturity under ſuch favourable circumſtances.

The fact is now well eſtabliſhed, of the beneficial effects of light and heat on vegetation; as it is perfectly known, that the colour and flavour, as well as the nutritive qualities of all the productions of the earth, depend in a great meaſure upon the proportion of the light and heat they enjoy during their growth. This is remarkably the caſe with fruits of almoſt every deſcription, and with ſuch ſorts of grain as are ſubjected to the proceſs of fermentation in the different operations of brewing, diſtilling, &c.

It is only ſince the invention of the ſaccharometer, an inſtrument now uſed for aſcertaining the ſtrength and value of worts, that the public attention has been directed to this

point. By the help of this contrivance, it is found that grain, produced under the favourable circumſtances already mentioned, is much more valuable than that which is raiſed in ſituations where more rain falls, and where it enjoys leſs ſunlight and heat during its growth and ripening.

Trials, made with every poſſible care, and under the direction of the beſt judgment, prove, beyond a doubt, that grain, produced in the earlieſt and drieſt ſituations, contains greatly more of the ſaccharine or fermentable matter than that which is raiſed under leſs favourable circumſtances.

The eaſt part of the county of Eaſt-Lothian is fortunately ſituated in this reſpect. The ſoil, which is a light loam upon a gravelly bottom, would be in danger of ſuffering from the Summer's drought, were not the heat tempered by the ſea-breeze, which keeps it always moderate; in that way, the bad effects of exceſſive heat are obviated, and all the advantages reſulting from the combined effects of light and moderate heat obtained.

To lay down rules that will apply to every ſituation, is a difficult, perhaps an impoſſible taſk, eſpecially where circumſtances are ſo diſſimilar; but, in the choice of grain for brewing, diſtilling, or indeed for any uſeful purpoſe, the buyer will find his account in purchaſing in thoſe diſtricts where the ſoil is dry, the harveſt early, and where the greateſt portion of heat and light are enjoyed during the Summer and Autumn.

The invention of the inſtrument above mentioned, has conſiderably altered the ſtandard by which the value of grain was formerly eſtimated; and, if properly taken up, will tend to eſtabliſh a rule for judging of the value of produce, much more correct, than any with which we have yet been acquainted. Formerly, the *weight*, in proportion to the cubical meaſure, was conſidered the beſt criterion; and, certainly, where grain is meant to be manufactured into meal, the circumſtance of its weighing well, will be a primary object with the buyer, and inſure a high price to the ſeller. To the conſumer, the trial by the ſaccharometer is a much more certain teſt; as, whatever the weight of grain may be, if it contains little ſaccharine matter, its nutritive qualities will be ſhort in proportion. That circumſtance, and that only, is the cauſe of the marked preference we daily ſee given to the grain raiſed in the lower parts of the county; which, by enjoying the advantages it does, arrives at maturity with all the qualities it ought to poſſeſs.

Beſides the trial by the ſaccharometer, there is another, though a much more uncertain teſt of the value of grain raiſed in the different parts of the county; namely, the *flavour*. Every perſon of judgment, who has had an opportunity of comparing

comparing and making himſelf acquainted with the productions of the early and late parts of the county, can with great eaſe diſtinguiſh them by the taſte, particularly the oat meal, the taſte of which is in general ſo inferior to what is made in the low country, as to ſell from one to two ſhillings *per* boll cheaper.

It would be at once tedious and difficult to deſcribe, with accuracy, the climate of each diſtrict, or the cauſes connected with it; perhaps, the moſt certain way of forming a right idea of it, is by marking the period at which the harveſt commences in each. The eaſt part of the county is from a month to five or ſix weeks earlier than the hills. The intermediate grounds are later, in proportion to their elevation; but ſoil, and other circumſtances, form ſeveral exceptions to this rule.

The ſnow, in the later parts of the county, ſeldom continues long; in the immediate vicinity of the ſea, it does not lye at all; but, in the Lammermuir hills, it ſometimes continues for three months together; and there are inſtances of its continuing, on ſome parts on the north of theſe hills, till the middle of June. This laſt is, however, a rare occurrence, and only happens when the ſnow has been much blown during the Winter, and the following Spring happens to be cold and late.

Upon the whole, the climate of Eaſt-Lothian, from its variety, ſeems better adapted to the different kinds of huſbandry than almoſt any other in the kingdom; and the perfection of its rural economy may, with truth, be aſcribed as much to its favourable ſituation, as to any other cauſe.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Curſory Hints on Agricultural Publications.

GENTLEMEN,

ALLOW me to offer my beſt wiſhes for the ſucceſs of your intended publication, which comes forward at a proper time, and promiſes to be attended with the happieſt effects, if conducted agreeable to the liberal principles laid down in the *Proſpectus*. To promote a ſpirit of inquiry and experiment, is at all times a laudable object; for it is only upon the ſolid foundation of facts and obſervations, that a juſt ſyſtem of huſbandry can be erected.

I was extremely ſorry to learn, from a notice on the cover of the Agricultural Annals, that ſuch publications are not very popular among our ſouthern neighbours. The ingenious Editor therefore recommends, that gentlemen, or their ſtewards,

ſhould intimate, at the *audit*, or counting day, *that favours would not be granted to thoſe tenants who did not take in the Annals;* which is a ſure proof of the bad taſte that prevails amongſt that uſeful claſs of men; for, with perſons of diſcernment and information, coercive meaſures, in my humble opinion, would be totally unneceſſary. In order that you may not be obliged to reſort to this new-faſhioned way of procuring readers, I beg leave to ſuggeſt, that diligence, judgment, and impartiality, will be the beſt preventatives. While the public always wiſh to deal upon the principle of "value received," they are generally diſpoſed to countenance and reward every perſon who furniſhes them with wholeſome inſtruction and rational entertainment. Yours, &c.

AMICUS.

FOR THE FARMER'S MAGAZINE.

Queſtions upon General Subjects of Agriculture.

IN order that ſuch perſons as wiſh to promote what muſt be conſidered the true intereſt of Britain, and are capable of communicating their knowledge, may be at no loſs in the choice of ſubjects, we ſubjoin a liſt of ſeveral leading Queſtions; Anſwers to which will be highly acceptable.

1. Whether is it moſt advantageous to the State, that land ſhould be cultivated by proprietors; or, that a right to cultivate the ſoil ſhould be aſſigned, for a limited time, to other perſons, upon certain terms, preſtations, and reſervations?

2. By which claſs, proprietors or tenants, have improvements been moſt generally introduced?

3. What proportion of the produce is the poſſeſſor of an arable farm capable of paying to the proprietor, upon the ſuppoſition that three fifths of the ſame are under corn, and that the crop, upon an average of years, ſhall be ſeven bolls *per* acre; one fifth under clover and paſture; and the remainder, one half under turnips and potatoes, and the other half plain ſummer-fallow: It being underſtood, that the poſſeſſor ſhall receive legal intereſt for his capital ſtock, with a ſufficient allowance for upholding his ſtock, ſo as it may be equally valuable at his deparature from, as at his entry to, the farm; and that his perſonal income from the farm ſhould not be leſs than what is uſually acquired by merchants and manufacturers, who inveſt a capital of a like extent in their reſpective trades?

4. Whether

4. Whether is it conducive to the public good, that reſtrictive covenants ſhould be laid upon tenants? and, if theſe are for the public good, to what extent ſhould they be impoſed?

5. What is the moſt proper ſize of an arable farm, where the growing of corn is the chief object, and the graſs ſyſtem only conſidered as meriting ſecondary attention?

6. Whether are ſmall or large farms moſt for national advantage, holding in view the intereſt of proprietors, the comfort and welfare of the tenants, and the benefit of the State?

7. Does the ſize of a farm affect the population of the country, under ſimilar management? Or, does the number of people, upon a given ſpot of ground, depend upon the ſyſtem of huſbandry adopted? that is to ſay, whether the land is principally kept in paſture or tillage, and whether improvements are neglected or practiſed.

8. Has the population of the agricultural counties of Scotland increaſed, or decreaſed, within theſe 50 years; and, if it has decreaſed, What are the cauſes which have occaſioned it? And how were the people employed in former times, when the cultivation of theſe diſtricts was confeſſedly imperfect?

9. Has the condition of the labouring peaſantry been meliorated within theſe 50 years? It is not meant here to inquire, whether wages have been raiſed; but, whether are they better fed, better clothed, and more comfortably accommodated?

10. Whether is it moſt for the public good, that the ground ſhould be ploughed by horſes, or by oxen, holding in view the original outlay in purchaſing the ſtock, the expence of ſupporting each kind, the quantity of labour they are capable of performing, and the value of the animals at the latter end? The attention of thoſe who work, or have worked, oxen, is particularly requeſted to this queſtion.

11. What is the ſum, per acre, required to ſtock a farm of arable land, where the horſes and implements are of the beſt kind, and where the tenant enters at Whitſunday, and cannot receive any benefit from the farm, till the ſucceeding crop is reaped?

12. If land is excluſively kept in graſs, Whether is the State equally benefited, as if aration was occaſionally introduced?

13. Does graſs land improve, when kept to a great age? and, if it does, Is the improvement equal to what may be gained from breaking it up, fallowing it after a few crops, and ſowing it down with freſh ſeeds?

14. If land is kept in graſs, Which is the moſt profitable way of ſtocking it, with cattle, or with ſheep? If with the former, Whether is the large or ſmall kinds moſt advantageous? If

with the latter, Whether is the ſhort Highland ſheep, or any of the varieties of the white-faced kind moſt profitable?

Any anſwers to this queſtion ſhould be regulated by the ſoil, climate, and ſituation of the farm; and by the demand afforded at the contiguous markets, where the ſtock is to be re-ſold.

15. Is there a neceſſity for ſmearing ſheep? and, What is the beſt method of doing it, for the ſafety of the animal, and of the leaſt prejudice to the wool?

16. Is the milking of ewes of advantage or diſadvantage to the farmer?

17. Whether are turnips moſt profitably uſed in feeding cattle or ſheep? If by the former, Whether ſhould they be conſumed at the ſtall, in an open yard, or in a graſs park? If by the latter, Whether ſhould the ſheep be confined in hurdles, or ſtakes, upon the ſpot, or have the turnips brought to them in an adjoining graſs field? and, Will the expence of carriage be repaid by the ſuperior value of the animal?

18. Whether ſhould turnips be raiſed according to the broad-caſt way, or in drills? and, If they are taken as a fallow crop, In which method will the land be cheapeſt and moſt effectually cleaned?

19. What is the cauſe of black, or ſmut, amongſt wheat? and, if the cauſe cannot be aſſigned, What is the beſt preſervative againſt this diſorder?

20. What is the cauſe of the *curl* amongſt potatoes? and, Is any other method found out to prevent it, than by procuring freſh ſeed from high lands, or late ſoils, where it was not fully ripened?

21. Can waſte lands be improved in a more profitable manner, than by planting them with barren trees adapted to the ſoil and climate? and, What may be the expence of planting 100 acres of ſuch land, fencing it completely, and training the trees up? and, Whether the value of the graſs, and the thinning of the trees, in a few years, would not exceed any profit which could accrue from the land in its original ſtate?

This laſt queſtion is ſo materially connected with the welfare of the kingdom, that we cannot but recommend it to the notice of thoſe who are verſant in matters of this kind, with the greateſt earneſtneſs. It is obvious, that large tracts, in almoſt every county, cannot be improved in any other manner; and, while we are dependent upon foreign nations for a ſupply of timber, it is an object of importance to inquire, Whether it is not in our own power to raiſe a ſufficient quantity at home, and whether this might not be done with profit to thoſe who embarked in ſuch undertakings?

Though

Though we have ſuggeſted the above as leading queſtions to our correſpondents, we by no means attempt to confine their inveſtigations within ſuch narrow bounds. Any fact, which will throw light upon the huſbandry of Britain, or contribute to promote its further improvement, will be acceptable. Freedom of inquiry we wiſh to encourage; and thoſe who chooſe to render us aſſiſtance in the undertaking we have embarked in, may confidently rely, that their favours will be gratefully acknowledged.

Queries upon Practical Subjects, to which Anſwers, founded upon Experience only, are required.

Q. 1. Have any experiments been made upon the cauſes of ſmut in wheat? What are their reſults, and the remedies that have been found moſt effectual in palliating or preventing the diſtemper?

Q. 2. On the blight in wheat, with the remedies that have been found moſt uſeful?

Q. 3. On the curl in potatoes, with the remedies that have been tried and found moſt uſeful?

Q. 4. On the curl in beans, with the remedies, &c.

Q. 5. On the deſtruction of ſlugs, with the remedies?

Q. 6. On the deſtruction of inſects, with the remedies?

Q. 7. On the rot in ſheep, with the remedies?

Q. 8. On the cheapeſt and moſt œconomical mode of feeding horſes, black cattle, &c. with the reſults of ſuch trials as have hitherto been made?

Q. 9. On the feeding of hogs, and the articles that have, from experience, been found moſt uſeful in fattening them with the leaſt expence?

Q. 10. On the feeding of poultry, with the cheapeſt and beſt articles for that purpoſe?

Q. 11. Compariſon between the advantages of feeding with grain in a broken or unbroken ſtate?

Q. 12. Whether do Autumn, Winter, or Spring tillage, conduce moſt to the fertility of the ſoil? and for what crops are they beſt adapted?

Q. 13. What degree of tillage has been found beſt adapted for different ſoils, and at what ſeaſons?

Q. 14. What are the crops to which particular ſoils are beſt adapted?

Q. 15. What are the manures adapted to each ſoil?

Q. 16. What quantity of manure ought to be laid upon each ſoil, ſo as to afford ſufficient nouriſhment to the crop, without any part of the manure being loſt?

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

View of the Agriculture of MIDDLESEX, *with Obſervations on the Means of its Improvement, and ſeveral Eſſays on Agriculture in general. Drawn up for the conſideration of the Board of Agriculture. By* JOHN MIDDLETON *Eſq. Landſurveyor.* 597 *pages.* Nicoll, *&c. London;* Creech, *Edinburgh.*

THE utility of a NATIONAL BOARD, for promoting and ſuperintending internal improvement, being apparent, it muſt excite ſurpriſe that Britain was ſo long deſtitute of ſuch an eſtabliſhment. *Hartlib*, a reſpectable writer of the laſt century, warmly ſuggeſted the propriety of appointing a director of huſbandry, under the authority of Government; and ſeveral intelligent perſons have, upon different occaſions, expreſſed a ſimilar ſentiment. The carrying ſuch a meaſure into effect, was, however, reſerved for Sir JOHN SINCLAIR, Baronet, whoſe patriotiſm and perſeverance are univerſally known and admired. Under his auſpices, the preſent Board of Agriculture was opened in July 1793.

The firſt, and certainly the moſt rational plan that could be adopted by the Board, was, to aſcertain the actual ſtate of huſbandry throughout the kingdom, to ſerve as a foundation or ground-work for future operations. Under their authority, ſurveys of every county have been made, printed, and circulated; ſeveral of which, after being amended and enlarged, are now reprinted. The ſurvey of Middleſex is ſelected as the ſubject of the preſent obſervations. Two reaſons determined this preference: 1*ſt*, Middleſex poſſeſſes many advantages over almoſt every other county, from its compriſing the capital of the Britiſh Empire, the ſeat of Government and Legiſlature, of the Law, of Literature, and the Fine Arts; where all the families of the firſt rank and wealth generally reſide during the ſitting of Parliament; and where the buſineſs of the richeſt merchants, bankers, and citizens, is carried on to an extent that is unequalled in any other part of the globe: And, 2*dly*, Becauſe this work, being mentioned by Mr Pitt in the Houſe of Commons, when the income tax was under conſideration, gained thereby a conſiderable ſhare of public notice *.

Middleſex,

* It is ſaid, a ſimilar circumſtance firſt brought Dr Smith's valuable work, "The Wealth of Nations," into public notice. Charles Fox quoted it in Parliament; and every body flew to peruſe that celebrated performance.

Middlesex, from local circumstances, does not possess within its bounds such extensive means of agricultural information as many other counties. It contains only 179,200 statute acres, of which not above one tenth, or 17,500 acres, are under corn crops; the remainder being either occupied by houses, gardens, or nursery grounds; or used for raising hay or pasture grass for supporting milch-cows, which in this district are necessarily very numerous. Such a small portion of it being therefore under the plough, and the cultivation not of the most perfect kind, renders this district (fertile as it otherwise is) rather barren in the sources whence agricultural knowledge can be collected.

Mr Middleton has, however, amply supplied this local defect; and, by extending his inquiries to general subjects of rural and political economy, has, upon the whole, presented to the public a work well calculated for conveying, not only instruction, but amusement. Whether the extraneous matter he has introduced, be consistent with the title of the work, is a problem we do not pretend to solve; nor are we disposed to call in question the propriety of extending the survey of the metropolitan county, or of discussing subjects therein, which generally affect the interest of the whole empire.

After a sensible introduction, wherein Mr Middleton expresses his surprise that Agriculture, 'to which we owe not only many of the comforts and conveniences of life, but even the means of existence, should so long have been neglected and almost despised,' he proceeds, in the execution of the work, agreeable to the plan laid down by the Board for the direction of their surveyors; and to this he has added a number of additional sections. We have heard several objections to this plan, which we are inclined to think have some weight. Uniformity, however desirable in other respects, cannot be obtained in a detail of rural affairs; for different districts contain different means of information; and hence we meet with some of these publications, like Sterne's works, with little more than blank chapters and sections. Besides, this uniformity occasions a sameness in the surveys, which, not to say worse of it, is calculated rather to tire, than instruct or entertain the reader, and somewhat like what he feels on a journey through a long flat country, where no variety prevails in the prospect before him.

Mr Middleton, notwithstanding his good sense, seems very much under the influence of professional prejudices. In the chapter on the State of Property, page 34. *&c. seq.* he describes, in a very animated manner, the loss sustained by landed proprietors, from having their estates under the management of

London

London attornies; and points out the character of a person fit for such an office. In the first part of the observation we heartily agree with him; for the agency of attornies has not only laid the foundation of much trouble and litigation to both landlord and tenant, but, by the absurd covenants they have introduced, have impeded the progress of agriculture in a very great degree. When he details the qualities necessary to be possessed by persons to whom the direction of estates should be intrusted, he, in a great measure, reduces the farmer to a cypher. In short, he wishes to invest the agent with a power, which no person whatever ought to possess over the affairs of another; and allures proprietors to give them this power, with a promise, which certainly is very tempting, no less than that of doubling in most instances the value of their estates, without laying out a single halfpenny more than paying the salary of an agent. *The proprietor, who refuses to have his revenue doubled upon terms so easy, must be blind indeed to his own interest.*

The character given by Mr Middleton, of the Middlesex *farmers*, is illiberal in the highest degree; and we trust will be omitted in the future publications upon the rural economy of that county. It requires no ordinary opinion of one's self, to warrant the speaking of others in terms so disgusting and disrespectful: In short, this part of the survey ought to be expunged.

When characterising the rural artificers, he says, page 54—

"The ordinary wheelwrights and smiths of Middlesex have no ideas of machinery, nor have they a capacity for executing any thing from drawings or specifications. The generality of the farmers labourers are equally stupid, and unwilling to execute their work in any way to which they are not accustomed. Hence, the difficulty of introducing any thing new in the implements or practice of husbandry, is almost insurmountable. Even the most trifling alteration, or deviation from the old system, is resisted, both by the artificers and labourers, and every possible obstruction thrown in the way of the farmer, to prevent what they deem an unjustifiable innovation on the established customs of the place. It is absolutely impossible to get a plough, a thrashing-mill, a winnowing machine, or indeed any other implement of husbandry, made on the best principles, by the country artificers of Middlesex; and it is not much less difficult to induce the labourers to use them, when they are brought from any other parts. Thus, the farmer is reduced to the disagreeable necessity of treading in the steps of his grandfather, though the practice may be, and in many points frequently is, at war with his own judgment and inclination."

If

If these things are true, the Middlesex farmer is in a most uncomfortable situation.

The subject of *Tithes* is considered in a just light, and treated in a more manly way than by several other surveyors, who, notwithstanding they disapprove of this tax, seem afraid to point out its pernicious consequences. We extract the following passages with pleasure:—

"The parish of Hutton, in Essex, was much occupied by the suckling of calves. The clergyman insisted on taking the tithes in kind. The inhabitants were willing to set out one tenth of every meal's milk; and it was the only means they had of continuing the suckling business.

"This, however, would not content the parson.—No; he insisted on having *all* the milk of every *tenth day*, though he must know that it would ruin their suckling system. They of course resisted; the parties were several years at law, and at last an unreasonable composition was obtained from the farmers.

"The success of these, and like cases, stimulated a vicar of Batterſea to draw the tithes of that parish in kind, which was continued for two or three years; during which time, nothing was more common than to meet his carts in the streets, retailing his tithes, with a person in each, vociferating, "Come, buy my asparagus!—"oh rare cauliflowers!" &c. &c.

"A few instances, equally oppressive with these, have happened in every county in England; and the necessary consequence is, that they have severally put a stop to some expensive, but promising improvements. Every matter of this kind becomes a subject of general conversation among farmers; and, of course, prevents their making the like attempts. *In short, an act of Parliament to prohibit the improvement of land by any considerable expenditure, would not more effectually do it than the tithe laws.*

"Had tithes never been established, happy would it have been for this country, and still more so for the clergy. They are a powerful cause of many quitting the church, and of creating and supporting sectaries: they are the never-ending source of ill-will, quarrelling, and litigation; and are, unquestionably, one great cause of the continuance of so much common and uncultivated land in these kingdoms. Within the narrow limits of my own knowledge, several premeditated bills of enclosure have been given up, rather than the land should be subjected to yield tithes in kind, after the great expence of the act, the commission, the survey, the making of new roads, the building of bridges, the fencing and erecting new buildings, and cultivating the land—should be incurred.

"A meeting was lately held, for the purpose of considering an application to Parliament for enclosing the commons above Pinner, in this county. It did not suit the rector to attend the meeting; he therefore

therefore sent his propoſal in a letter; which was, that a particular part of the commons, containing 300 acres, ſhould be allotted to him in one piece, encloſed with a ditch, bank, and park-paling, and maintained in good repair for ever, at the expence of the other perſons who had a right of common. As ſuch an *unreaſonable* requeſt could not be complied with, it of courſe defeated the intended application, and the land ſtill continues in common.

"For about 794 years after Chriſt, tithes had no eſtabliſhment in this iſland; and *then*, only over a ſmall part of it, till about the year 854, when they were extended to the reſt of England. The occaſion of their being given, is a powerful reaſon againſt their continuance. It was at a time, too, of great ſuperſtition and groſs ignorance; and tithes are continued to theſe days, by a barbarous policy, which ſets an inſurmountable obſtruction in the way of every great improvement, and lays an intolerable burden on the moſt virtuous and valuable claſs in ſociety, to which half the property in theſe kingdoms contributes nothing. The operation of this tax is, to keep down or reduce the produce of the earth to much leſs in quantity than it would otherwiſe be, and of courſe to increaſe the price, and promote our dependence for bread on the importation of corn from foreign countries, which could with eaſe be raiſed at home.

"Tithes create grievous heart-burnings on account of their *partial* operation, and which is viſible in moſt parts of this county, by a very great number of the moſt wealthy perſons living in expenſive houſes, or carrying on the largeſt manufactories, and who pay to the clergyman nothing, or, at the moſt, only a few ſhillings a year, as a compoſition in lieu of the tithe of a garden. But, mark the reverſe: The ſmaller farmers are a very numerous claſs in ſociety, ſupporting their families by the utmoſt exertion of their induſtry: many of them are unable to keep the wolf from the door, although themſelves, their wives and children, would think it an indulgence, could they afford to fill their ſtomachs with the coarſeſt fare. Yet will the tithe laws not fail to compel ſuch miſerable, but valuable beings, to pay a ſixth, a fifth, or even a fourth, of the rental value of their land; and, in ſome caſes, more than the rent. Thus, the poor farmer pays to the clergyman from 10l. to upwards of 100l. a year, while his wealthy neighbour does not pay ſo many ſhillings.

"Every poſſible argument in favour of tithes upon land, in excluſion of houſes and other property, is inſupportable. Why tax the land to build churches? Does the land go to them? Is it benefited by them? There is not, nor can there be, any connexion whatever between the land and the church. Religion, in a word, is a mere *perſonal* concern; and, of courſe, every poſſible expence relative to it, ought to be defrayed by a *perſonal* tax, without reference to any particular ſpecies of property. A greater

greater absurdity can hardly be found, than to tax land, houses, money, stock in trade, merchandise, shipping, &c. for the support of the church. Land has certainly no more analogy than shipping, to the church; yet, no one ever thought of taxing shipping for the support of it. Neither, I repeat, ought land to be assessable for that purpose."

Mr Middleton is a friend to *Leases*, and thinks the withholding them is a powerful bar to improvements. He is also an advocate for the tenant having power to sell or assign his lease, and thinks it bad policy to deny him that liberty: sentiments, in which we heartily concur.

Under the article of *Expence and Profit*, (a section which ought not to have been included in the plan laid down by the Board) we notice a statement of the produce of 150 acres of grass land, which is supposed to yield the farmer 2l. per acre of profit. We have no idea that any land will admit of being annually cut for hay for any length of time, unless it is very frequently recruited with dung; and cannot think the quantity of dung applied (300 loads) would prevent its progressive deterioration. We know no method so effectual to scourge land, as to cut hay from it every year; indeed the crops in the neighbourhood of London (which are but poor indeed) corroborate this doctrine.

Speaking of the *Implements of Husbandry*, Mr Middleton makes a comparison between the swing plough, and one of the same construction upon wheels, and very justly gives the preference to the former. No excuse can be admitted for using the latter, except where unskilful ploughmen prevail; and, from our observation, good ploughmen are very scarce in Middlesex. He justly reprobates the swing plough commonly used in that county, which is, without question, the most awkward implement for tilling ground that can be imagined.

The *Commons* in Middlesex are next described; and the great disadvantages sustained by the public, from their being allowed to remain in that unproductive state, are detailed in a perspicuous manner. It must excite astonishment, that, in this county, where the means of improvement are so numerous, the waste lands should equal the quantity annually sown with corn; yet such is the fact. Mr Middleton states, that the neighbourhood of commons is unfriendly to the health and longevity of mankind; which is an additional reason for improving them.

The calculations, p. 111, respecting the number of persons wholly supported by agriculture in England and Wales, are curious.

"Cultivators

" Cultivators of farms, six persons to every 100 acres, is — — — —	2,340,000
Ditto of gardens, hop grounds, nurseries, &c.	300,000
Smiths, wheelwrights, bricklayers, masons, carpenters, painters, plumbers, glaziers, various manufacturers of furniture, woollen cloth, and making it up, linen, and making it up, leather, and making it into shoes, boots, &c. hose, harness and saddlery: as much of each of these descriptions of persons as are wholly employed by the cultivators of the soil, men, women, and children, about seven persons to each farm of 100 acres, is — — —	2,800,000
The like of millers, bakers, maltsters, brewers, distillers, starchmakers, dealers in corn, and persons employed in the commerce of corn —	500,000
The landlords of farms — —	40,000
Persons supported by taxes on the produce of land	120,000
Total —	6,100,000

It will be evident, at one glance, that these calculations are more fanciful than just. Political arithmetic has lately been much in vogue, and who would not follow the fashion?

The section upon *Tillage*, page 138, confirms what we have already mentioned relative to the imperfect cultivation of this county. We select the following passage:

" In general, the ploughing is deep, and with a wide furrow, which, of course, very much increases the weight or draught, and necessarily requires a strong team, which, moving with a very slow pace, as all heavy teams do, performs but very little work in a day. It is not one time in fifty that they go to plough with so few as three horses; but mostly, for the lighter work, using four; on rather stronger land, five, and even sometimes six: in every instance drawing at length, or one before the other. In May 1796, I saw, in one day, two teams, with six horses in each, and three men to attend each team; namely, one to hold the plough, and two to drive the horses, ploughing, with a wide furrow, about three quarters of an acre per day. Indeed, these long heavy teams of horses do not, on an average, plough more than four or five acres in six days; at an expence, to the owners of such teams, of about twenty-seven shillings an acre for one bad ploughing. I have seen a barley soil receive the last ploughing, previous to sowing turnips, with a team of five horses, and two men to attend them; and, at the same time, a team of six horses in length, with three men attending, were giving the first ploughing to a fallow."

It

It is our opinion, that if the system of ploughing in this county was reformed, much more gain would accrue to the proprietors, than by appointing land doctors and agents, as is eagerly recommended by our author.

We do not coincide in opinion with Mr Middleton, respecting the breadth of ridges on wet lands. Experience justifies us in saying, that the ground, in every case where the bottom is wet, ought to be raised up, which narrow ridges will not admit; and that the breadth of the ridge, in such cases, should always be in direct proportion to the depth of the soil.

A striking instance is afforded, page 148. of this work, being rather a general survey of the kingdom, than confined to a single county; for the practices of five different counties, viz. Aberdeen, Merioneth, East Lothian, Dunbarton, and Perth, are given in one single page.

We apprehend, the rotations of cropping, recommended in this work, are liable to exception; and would neither prove profitable to the farmer, nor beneficial to the ground. For instance, take rotation, number 4th,

Peas,
Beans,
Corn,
Clover,
Tares,
Turnips,

which is a rotation that no man in his senses would practise. If there be a just and true principle in farming, it is, that leguminous and culmiferous crops alternately afford the greatest possible return from the soil. Whatever might be the profit from the above crops, in the vicinity of a great city, we are certain that, in ordinary cases, a farmer would pay little or no rent, if he followed such a rotation. Mr Middleton puts too much dependence upon the merits of a rotation; for every thing must depend upon the manner in which the rotation is followed out in all the different processes of management. When he speaks of taking three green for one white crop, upon the worst or more exhausted land, he appears not to have paid due attention to his subject. Bad lands are not calculated for green crops; and experience proves, that it is easier to raise a heavy crop of wheat, than a crop of turnips, upon inferior soils.

Our author says, page 167, that the old doctrine of fallowing for wheat, is exploded; but we think he is rather hasty in making such an assertion. In some situations, it is an easy matter to lay aside Summer fallow, and to raise wheat after

green

green crops; but we are of opinion, that no man, who is generally acquainted with the soil and climate of Great Britain, will attempt to explode Summer fallow altogether. The advanced state of agriculture has already, in a great measure, superseded the necessity of resorting so frequently to the ancient practice of fallowing for cleaning the ground; but while we mention this, we are at the same time confident, that a great proportion of the arable land in the kingdom, could not be kept clean, or in good order, without being completely wrought during the Summer months. In those counties where the harvest is early, and the crops removed from the ground before the heat of the sun is abated, the land may be wrought in a very perfect manner after carrying a crop; but in all situations where the harvest is late, and no tillage can be given before Winter, it will be found absolutely necessary to practise Summer fallowing at stated periods, without which, the soil, in process of time, would be overrun with weeds. This remark is supported by the condition of the lands in the vicinity of almost every great town, where, from high rents, and stock of manure, the farmer is tempted to proceed in raising corn crops much longer than the rules of good husbandry will justify. A number of improvers have gone from one extreme to another: From censuring the old mode of one fallow to two crops, which was a very improper practice, they have gone the length of condemning Summer fallow altogether.

Speaking of the management of *Meadows*, Mr Middleton says, pages 224 and 225—

'Manure is invariably laid on meadow land about the month of October, while it is sufficiently dry to bear the drawing of loaded carts without injury; and when the heat of the day is so moderated as not to exhale the volatile parts of the dung.

'This large tract or district of *clay land* would have been of little or no value *in a state of aration*. The difficulty of tilling it; the expensive teams which must have been employed on it; the few months in every year when it could be ploughed with success; and the *uncertain* produce of such a soil, are circumstances which *would have kept down its value to little or nothing. But, mark the difference! Laying it down to permanent grass, has been the means of advancing its rent to 3l. an acre, and of its producing, in a medium of seasons, two tons of hay per acre, of the highest quality in the world for the feed of horses.*'

That clay land, especially where manure can be purchased in quantities, is of little or no value, we expressly deny. No kind of soil will pay so well for manure, nor will any yield such profitable returns of wheat and beans, as clay and heavy loam,

loam, if well cultivated. This is not a matter of opinion, but confirmed by the experience of farmers in every quarter.

Clay land has seldom been considered as lying in the most profitable state, when kept permanently in grass; nor does the extent of the produce, mentioned above, equal what might have been raised by sowing clover and rye-grass amongst a fallow crop of corn. We are of opinion, that no land whatever should be kept exclusively in grass; and that heavy soils, especially, stand in need of being often recruited with fresh seeds.

Under the article of *Feeding*, we find the following passage:

'I am fully persuaded, that all the straw in haulm in the kingdom, over and above what is indispensably necessary for thatching buildings, and littering cattle, might be easily converted into wholesome food, and made to contribute materially towards the rearing and support of lean stock, by the simple operation of cutting it into chaff; and, in some cases, by the commixture of roots and other articles, in order to render it more palatable, and to induce the cattle to eat an increased quantity. When so prepared, it should be given to them in mangers of rather a large size, and calculated to prevent waste. There can be no doubt but this method of preparing and consuming straw, haulm, &c. would tend considerably to increase the number of black cattle; and, when compared with the present practice of treading and rotting it into manure of a poor quality, must be considered of great national importance. Thus the straw, &c. is not only rendered fit for the support of live stock; but, by being digested, and passed through their bodies, it must become a much more highly enriched manure, than in the ordinary way of treading and rotting.'

This doctrine is certainly questionable. Query, What supports the animal? Are not the finest parts of the straw appropriated to that purpose, while the inferior or feculent part is thrown off for dung? It is very certain, that a quantity of straw eaten, assists to ferment the remainder; but if all the straw in the kingdom were cut into chaff, and passed through the intestines of an animal, we believe that both the quantity and quality of dung would be greatly curtailed.

Mr Middleton very justly is of opinion, that improvements are executed at less expence by farmers, than by proprietors; and recommends, as the best mode of letting lands, that the landlord should grant leases, proportioning the rent and duration of the lease, to the nature and supposed expence of the intended improvements. We join him in opinion, that this mode would render complete justice to the interests, and promote the advantage, of both parties.

Upon the subject of *Paring* and *Burning*, our opinions are not very different from those entertained by Mr Middleton. We are aware that those who have made chemical science their study, do almost unanimously condemn the practice, while the generality of professional husbandmen as eagerly maintain its utility. If Hounslow-heath, Finchley-common, or other wastes, were to be put in a state of aration, we know of no method so effectual as to pare and burn them, in the first instance; but, upon the other grass lands of Middlesex, we consider such an operation as wholly unnecessary.

Upon the subject of *Irrigation*, our author speaks rather in too high terms. After stating the advantages attending this mode of improvement, he says:—

'Forty acres of good water meadow will support, in the greatest luxuriance, 500 Wiltshire ewes and lambs for six weeks, from the middle of March to the 1st of May, during which time they will improve one shilling a week, or pay *three pounds fifteen shillings* per acre, at a time of year when all other farmers are distressed for a want of food for their stock. In Middlesex, it would still be more valuable, as five pounds worth of hay might be mown off it the first week in May.'

The above exceeds any thing we have met with respecting the produce of grass land; for it is only the best meadow that will feed 5 ewes and lambs, per acre, from the middle to the 1st of May; and the greatest part of the pastures in the kingdom will not support near so many.

A very distinct account is given, page 328. & seq. of the manner in which milk cows are kept in the vicinity of the metropolis. The expence per week is stated at 7s., or 18l. 4s. *per annum*, and the produce 29l. 10s., leaving a profit of 11l. 6s. per cow; but this includes allowance for interest of stock, rent of buildings, losses, attendance, and all other expences.

The dung and urine of sheep, at 20 miles or more from London, is stated to be worth about 5s. per head *per annum*, which, in many cases, is more than the rent of the land. Mr Middleton deals too much in calculations of this kind, and appears to build them more upon conjecture than experiment. His observations upon the sheep stock in South Britain, are given in the same manner, and seem to have been more the result of information than observation.

The section concerning *horses*, and their use in husbandry, compared with *oxen*, contains much valuable matter. The mode of feeding farm-horses is amply detailed, and the expence *per annum* said to be 35l. Mr Middleton is inimical to working

ing oxen, and gives solid and substantial reasons for preferring horses in carrying on farm work. It appears, that no more than 13 oxen are wrought in the whole county; which is a convincing proof of the estimation in which these animals are held by the Middlesex farmer.

Public houses are stated to be more ruinous to the lower orders of society, than all other evils put together. One reason given for their increase is, that so many brewers and distillers are in the commission of the peace.

That public houses or dram shops are destructive of morals, and inimical to the welfare of society, is a point upon which there can be no difference of opinion; but that their increase is owing to the numbers of brewers and distillers being in the commission of the peace, we deny. The far-fetched and ill-founded observation of the man whose earnings amount only to 9s. per week, bringing home a shilling more at the end of it than the person who earns 12s., does not carry conviction along with it. We should be glad to inquire, what tie of virtue, or sense of duty, could influence the one, more than the other. The temptation to both is the same; and were we only to reason upon the subject, we would say, that the person who had the smallest income, with a large family to support, would be the first to dissipate a part of it, in order to drown care. Much of what is said on this subject, can be considered only as declamation.

The risible faculties are not a little excited, when we observe our author recommending milk and water to the labourers, instead of malt liquor. A hundred thousand volumes would not convince an Englishman, that the former is a better beverage for allaying his thirst, and enabling him to perform his work, than ale and porter. A manuscript paper of Sir William Pulteney's is likewise quoted, wherein the worthy Baronet recommends vinegar and water as an excellent substitute for other liquors. We are fearful that the obstinacy of this class of people will prevent those salutary advices from being successful, and that they will rather take their hazard of receiving mischief from fermented liquors, than give up the use of them for any of the substitutes proposed.

After mentioning the price of provisions, which are generally as low in London as any part of the kingdom, Mr Middleton calculates, that each inhabitant of the county, young and old, consumes 30 stones and a half (of 8 lib. each) of animal food, 8 bushels of wheat, and 1 ton of vegetables, per annum. As for malt liquors, the quantity said to be drunk by the lower ranks, is astonishing. Take his own words for it.

'There are some persons who do not drink malt liquor at all; most people of fortune and fashion drink it very sparingly; while great numbers of the lower orders, particularly coalheavers, anchorsmiths, porters, &c. drink it to great excess, even, it is supposed, to the amount of five hundred, or one thousand gallons a year each. Upon the whole, I apprehend the quantity of *malt liquor* consumed in the county, would almost average a hundred gallons per head of all ages and conditions.'

One thousand gallons per annum, is nearly, on an average, about 14 bottles of ale or porter per day, and is almost equal to what is passed through many drains, made to carry off the superabundant moisture from the earth.

In another part of the work, when treating of victualling houses, Mr Middleton supposes, 'that upwards of three millions of money are expended by the labouring people, upon ale, porter, gin, and compounds, which is 25l. per family of that description of persons.' If wages, on an average, be 12s. per week, the amount per ann. is 32l. 4s., which leaves only 7l. 4s. for purchasing bread, butcher meat, vegetables, and clothes!

The different public markets in London are well described, though it appears the Lord Mayor (Watson) affected want of knowledge when applied to for information. Accounts taken from the Customhouse books are likewise given; which show, in a clear light, the different quantities of corn imported into, and exported from London and other parts of the kingdom. Mr Middleton suggests, that it would be an useful measure to license and swear the Smithfield salesmen; and likewise, that they should be obliged to find security for faithfully executing their office. The latter might prove of advantage to the public; but if a person is determined to play the rogue, licensing and swearing will hardly prevent him.

When treating of *Manufactures*, Mr Middleton, with great propriety, ranks Agriculture in the highest class. He states the farming capital in South Britain at 5l. per acre, or 200 millions, and that the annual produce is 65l. per cent. or 130 millions. From thence he deduces, that agriculture must be allowed to surpass all other manufactures that can be brought into competition, not only as to the gross amount, but also as to its superior usefulness.

We perfectly agree with Mr Middleton in his conclusions, but differ widely from the premises he assumes. In the *first* place, we do not consider the quantity of arable land in South Britain to be so great as he states it; and we apprehend the commons and wastes to be more extensive. In the *second* place, no agricultural capital is required for the land occupied by

by roads, woods, hedge-rows, and water, or as pleasure ground; and these, by his own computation, amount nearly to four millions of acres. If we add the commons and wastes, which, in some counties, are one fourth, and even, in Middlesex, are one tenth, of the whole land, and which require a very trifling stock, it will be found, that agricultural capital is mostly laid on about 20 millions of acres, and that the amount of this capital will not much exceed one half of what is here computed. We suspect much, that Mr Middleton led the Premier astray, when he founded upon his calculations. Political arithmetic is a deceiving science. The first figure is usually drawn from an hypothesis, and the smallest error at the outset renders the whole calculation delusive and fallacious.

The greatest part of the next chapter (viz. the 17th, and entitled Miscellaneous Observations) may be termed a most ingenious romance; and we give the author great credit for the fertility of his imagination. The section concerning the depredations committed upon the farmer's property, by game and vermin, exceeds any thing we ever saw in the calculation line. A very fair and well written account is made out, and figures are used to prove, that the farmer sustains an annual loss of ten millions, from moles, mice, sparrows, rooks, magpies, &c. If we add to this another loss, being 4s. per acre on all the land in England, which the author computes is sustained from thieving, &c. it will appear, that nearly twenty millions Sterling is the total amount of the damage sustained by the landed interest annually. After this, who will say that farming is a good trade? or rather, who will not be surprised that the whole of the farmers of the kingdom have not long ago been ruined?

The attempt to estimate the quantity of arable land in South Britain has merit; but, from a deficiency of facts, it proves little. For instance, the supposed extent of arable land is first used to ascertain the number of horses employed in agriculture; and the quantity of corn necessary for supporting these horses, is then brought as a proof of the number of acres of arable land; which is certainly a most ingenious mode of calculation.

Our author thinks, that one fifth of the arable land in England is every year under summer-fallow, or in a non-productive state; but we are confident he is mistaken in this opinion, and that the quantity is not so extensive by one half. In several counties, there is scarcely such a thing as plain fallow; and, unless it be upon the common fields, such fallows are much less frequent than formerly. Even in the most of places where the tenant is taken bound to have one fallow for two crops of corn, turnips are taken in its place. In-

stead, therefore, of two millions eight hundred thousand acres, we are inclined to believe, there are not one million of acres of plain fallow in all England.

Under Chap. 18. (*Means of Improvement*) the number of lawyers, who practise in the several courts, are stated to be seven thousand and forty! We believe this is the first time that this learned and respectable profession was ever classed amongst the means of improvement; though gaols and houses of correction (the number of which are also detailed) may very properly come under that description.

A variety of quotations are given from Colquhoun's Treatise on the Police of London, which, we hope, for the credit of its inhabitants, contain exaggerated accounts of the crimes committed in the capital, and its vicinity. It is mentioned, that 115,000, or nearly one fifth, are persons whose pursuits are either criminal, illegal, or immoral; or, in other words, that every fifth person deserves the gallows. If such things are true, the fair inference would be, that there is no such thing as a police in the county of Middlesex; or, how could the daring offences mentioned in this work be committed with such impunity?

It gave us surprise to notice a kind of comparison, p. 480, between the Middlesex husbandry and that of some other counties, wherein the author concludes with a flourish in favour of the former. He says—

'There is not any land in Middlesex, (the commons excepted), from the well protected and healthy copses at Rislip, to those wonders of their kind, the gardens at the Neat-houses, but what is cultivated, and, for the most part, raised to an astonishing degree of fertility.'

How can this be reconciled with the accounts previously given of the farm-management of the district? The farmers were said to be unprovided with proper ploughs; the servants could not hold, nor the artificers repair them; the lower ranks did little but pilfer and drink; and the higher ranks were inattentive to the management of their estates. This is the substance of what is said concerning these matters, and probably it is just:—But can the husbandry of Middlesex be considered as perfect, if it is defective in every point leading to perfection? Censure is either improperly applied in the one case, or unmerited compliments bestowed in the other.

As many objects are embraced in this survey, which will likely be neglected in others, we have devoted a larger space of our pamphlet to the task of reviewing it, than, in ordinary

cases,

caſes, can be ſpared to works of the like kind. We have ſtated our ſentiments, with candour and freedom. upon the different articles of rural and political economy; and, in pointing out the errors of the author, have acted under the impreſſion, that we were thereby benefiting the public. and affording him the means of correcting theſe defects, when the work comes to a ſecond edition, which, it is expected, will ſoon happen.

Upon the whole, the ſurvey of Middleſex may be read with pleaſure, as it contains much important information, though rather arranged in a deſultory manner. Though we have not objected to the great maſs of political arithmetic which the author has introduced, we cannot help remarking, that he would have been more correct, probably as uſeful, and certainly entitled to as much applauſe, had he ſimply confined himſelf to a detail of the agriculture of Middleſex, with obſervations on the means of its improvement. N.

ART. II.—*General View of the Agriculture of the County of* NOTTINGHAM, *with Obſervations on the Means of its Improvement. Drawn up for the conſideration of the Board of Agriculture and Internal Improvement. By* ROBERT LOWE *Eſq.* Nicol, *&c. London;* Creech, *Edinburgh.*

THE different ſurveys of this kingdom, publiſhed under the authority of the Board of Agriculture, though drawn up agreeable to an uniform plan, prove, in a moſt convincing way, that the ſcheme propoſed to be adopted for detailing the huſbandry of Great Britain, is not perfect, becauſe it is uniform, and that their value and importance muſt neceſſarily depend upon the abilities of the ſurveyor, and the manner in which he diſcharges the duties of his office. In ſome of theſe works, we obſerve very uſeful information, reſpecting the preſent ſtate of huſbandry in the diſtrict deſcribed; while the obſervations upon the means of exciting and accompliſhing further improvements, (which is certainly the main deſign of the publication), are neglected and paſſed over. Others, again, uſe facts in the manner ſome clergymen do a text, and extend their obſervations to a greater length than may be deemed conſiſtent with the nature of the publication. The latter ſtand a chance, however, of being more acceptable to the public; for this mode admits full ſcope to the talents and abilities of the ſurveyor, and affords him an opportunity of communicating knowledge upon almoſt every branch of rural affairs.

The work under conſideration may be claſſed amongſt thoſe firſt mentioned; and Mr Lowe, in a preliminary obſervation,

acknowleges that his intentions were "only to ſtate, as far as came within his knowledge, the uſual courſe of huſbandry, the new practices introduced, and ſuch improvements as ſuggeſted themſelves to him, without pretending to enter deep into ſcientific diſquiſition on the ſubject of political regulation, which the reader therefore muſt expect to be but ſlightly touched upon." This obſervation appears to have guided him in the execution of the work; for, while we peruſe a plain, and, we believe, a very faithful deſcription of the preſent ſtate of huſbandry in the county of Nottingham, the means of accompliſhing future improvements, or of removing obſtacles, are only ſlightly noticed.

The *climate* of this diſtrict is deſcribed to be dry, and the harveſt generally early; circumſtances of the firſt importance, and which affect the value of the land much more than is uſually ſuppoſed. In point of ſoil, Mr Lowe divides the county into three diſtricts: 1ſt, ſand or gravel; 2d, clay; 3d, limeſtone and coal land: And theſe he afterwards ſubdivides into ſmaller portions, ſo as the ſubject may be fully comprehended. We have always accounted it a matter of difficulty to preſent an accurate view of the ſoil; which is ſo variable in moſt counties, and many of thoſe varieties approaching one another ſo nearly, that it is almoſt impoſſible to give a map or deſcription of thoſe particulars, without unavoidably falling into error.

In the chapter upon the *cultivation of arable land*, and the rotation of crops, the author mentions, that "the introduction of turnips was of great importance in enſuring a good crop of barley, after being fed off with ſheep; but that, till within theſe few years, it was not uſual to lay down with ſeeds." He adds, "that the culture of a break, well managed, may be ſtated to be—Break up for, 1ſt, turnips, laying ten quarters of lime on an acre; 2d, barley; 3d, rye, ſometimes wheat; 4th, oats, with ſeeds; *i. e.* white clover and rye-graſs, which are mown for hay, and then thrown open." We may readily ſuppoſe that this rotation will not be viewed by many farmers as a judicious one. The fact is, it is certainly as bad a courſe for turnip land as can be practiſed; but we muſt remark, that this is only followed on the foreſt breaks, where it has been an immemorial cuſtom for the inhabitants of townſhips to take up temporary encloſures, and keep them in tillage for five or ſix years.

Skegs are mentioned in this chapter. Query, What kind of grain are they? A note at the foot of the page bids us turn to the Appendix; but, upon conſulting the place referred to, we receive no other anſwer, than that they are Skegs; or, in other words,

words, that they appear to be the *Avena Stipiformis* of Linnæus. Our author ſhould have attended that he was writing for farmers, and not for botaniſts.

But the greateſt improvement on foreſt lands is, where they are permanently encloſed. We extract, with much ſatisfaction, what is ſtated concerning the Duke of Newcaſtle's improvements on the land at Clumber-park, which originally was a mean heathy ſoil.—

'Amongſt theſe, deſerves to be named, in the firſt place, Clumber-park, belonging to his Grace the Duke of Newcaſtle, between ten and eleven miles round, and containing in the whole about 4000 acres, which may be ſaid to be a new creation within theſe thirty years: at which time it was a black heath, full of rabbits, having a narrow river running through it, with a ſmally boggy cloſe or two. But now, beſides a magnificent manſion, and noble lake and river, with extenſive plantations, which will be particularly noticed hereafter, above 2000 acres are brought into a regular and excellent courſe of tillage; maintaining, at the ſame time, between three and four thouſand ſheep, and are all in his Grace's own occupation.

'The following courſes and practices of huſbandry, uſed in Clumber-park, were communicated to me by Mr Birket, his Grace's farmer, a very active and intelligent perſon.

'*On the beſt Land.*—Firſt year, turnips; ſecond, barley; third, clover; fourth, wheat; fifth, turnips; ſixth, barley; ſeventh, ſeed; which lye from five to ſix years.

'*On bad Land.*—Firſt, turnips; ſecond, oats, with ſeeds, which lye as before. The whins are ſtubbed conſtantly, to hinder his being obliged to break up ſooner. He keeps a year's ſtock of dung before hand, and lays it on for turnips in autumn, ploughing directly. He harrows and gets out the twitch, (called in ſome counties couch graſs) as uſual in the Spring. He lays two chalders, or eight quarters of lime an acre for turnips, but never after in that courſe.'

The following paſſage on the culture of *roota baga*, or Swediſh turnip, we recommend to the attention of our readers.—

'The roota baga, or Swediſh turnip, is now cultivated by a few farmers in this diſtrict. It appears to be ſuperior to the common turnip in many reſpects, particularly in hardineſs, as it ſtood the laſt ſevere Winter without the leaſt injury. It is ate with greedineſs by all animals, from the horſe to the ſwine. Sheep prefer it to all others: but the material advantage that has been made of it, is the ſubſtituting it for corn in the food of draught horſes; in which it has been found to anſwer the wiſh of every perſon who has yet tried it. The turnips are put into a tub or barrel, and cut ſmall with an inſtrument like an hoe, with the

blade

blade put perpendicularly into the ſhaft; a man will cut in one hour as much as ſix horſes can eat in twenty-four. The tops and bottoms are previouſly cut off, and given to the pigs. Horſes, that are hard-worked, look full as well when fed with this turnip, and very little hay, as they formerly did when very high fed with corn. The Swediſh turnip ſhould be ſowed early, from the 15th of May to the 10th of June.'

The following information on the culture of the roota baga, is given by J. DAIKEN, Eſq. of Nottingham:—

'Mr Daiken, † about the tenth of May 1794, ſowed about four acres with the ſeed of roota baga, about 2 lb. per acre, on good ſand land, worth twenty ſhillings an acre, manured as for turnips, and having been ploughed four or five times: the reſt of the field, to the amount of nine acres in all, with common turnip, and turnip-rooted cabbage, all broad-caſt. They were not tranſplanted, but hoed out nine inches aſunder, at three hoeings, at ſeven ſhillings and ſixpence an acre; no other culture. In November, began to uſe them for horſes, giving at firſt clover and rye-graſs—hay, oats, and beans; but finding that the horſes did well upon them, left off all corn, and continued them on hay, and the roots only; fifteen were thus fed for about two months, were conſtantly hard worked, and preſerved themſelves in very good condition. Mr Daiken is ſo well convinced, that in this application they were worth thirty pounds an acre, that he would in future, if he could not get them otherwiſe, rather give that ſum per acre for one or two acres, than not have them for this uſe. They loſt their leaves entirely when the froſt ſet in; but the roots were not the leaſt affected, though the common turnips in the ſame field were totally deſtroyed. Paſſengers paſſing through the field cut holes in them, which did not let the froſt injure them, nor were thoſe hurt which were damaged by cattle biting them. Some came to the weight of 16 lb., and Mr Daiken thinks the average of the crop 8 lb., and much to exceed in tonnage per acre common turnips.

'Mr Daiken gave them alſo to hogs, cattle and ſheep. They are excellent for hogs; and ſheep being let into the field before the common turnips were deſtroyed, gave ſo decided a preference to the roota baga, that they would not ſettle on the common turnips, while the others were to be had.

'The method of giving them to horſes, is to cut off the top-root, to waſh them, and to cut them roughly with a perpendicular hoe, and then given directly, without keeping them to dry. The horſes ate them with avidity, and ſeemed even to prefer them to corn. Their qualities appear to be ſingular, as they bind horſes inſtead of relaxing them, as other roots do. One mare was kept entirely upon them and ſtraw, worked every day, did well, and never

† Mr Daiken thinks, that, in general, the roota baga ſhould be ſown about a month ſooner than other turnips.

never looked better: this mare was more bound by them than the reſt. They have a ſtrong effect upon making the coats fine; and one or two affected by the greaſe, were cured by them, as they act as a ſtrong diuretic. In this mode of application, one acre maintained fifteen about two months; and Mr Daiken is ſo well convinced of the utility of the plant, as well as many of his neighbours, that he intends, and they alſo, to increaſe the cultivation much.

'Mr Daiken ſuſpects there are two ſorts of the roota baga, becauſe ſome, upon cutting, are white within, but in general yellow; otherwiſe of the ſame external appearance. The yellow is the beſt.'

Mr Lowe is very particular in deſcribing the *Woods* and *Plantations* in this county, and takes up more than one fourth of the Survey, or one fifth of the whole work, if the appendix is included, on this ſubject. This is a branch of an agricultural ſurvey well deſerving attention, and which, perhaps, has been too much neglected by the generality of ſurveyors. The climate and ſoil of this county appear favourable to the growing of timber; and we notice, with pleaſure, that the landed proprietors do not neglect this permanent and national improvement; which we hope, from what was mentioned laſt ſeſſion of Parliament by Sir William Dolben and Mr Pierrepoint, will in future be attended to in every enclоſure bill.

It appears that there is not much waſte land in Nottinghamſhire, and that what remains is chiefly in rabbit-warrens. The ancient Royal foreſt of Sherwood, which was of great extent, may now be conſidered as wholly diſforeſted; for the ſoil is underſtood to have been granted by the Crown to different lords of the manor, reſerving only, in foreſt language, the *vert* and *veniſon*, or trees and deer, which laſt is now entirely extirpated.

The uſe of *lime* is very imperfectly underſtood in this county. One gentleman conſiders lime as hurtful without farmyard manure. Another has laid from 1 to as far as 20 chalders, or 640 buſhels, on an acre of cold clay ſoil, and found no benefit whatever. A third limed part of a red clayey loam, and dunged the whole, but ſaw no difference in the crop; and where the heaps were laid, nothing has grown ſince. From theſe particulars, Mr Lowe concludes that the benefit of lime on clays is not fully eſtabliſhed.

We have often remarked, that lime has, in many inſtances, been uſed at random, no inquiry being made, nor attention paid, to the condition of the ſoil, whether it has been overcropped and worn out, or has lately been refreſhed with graſs, or enriched by dung. From inattention to theſe particulars, and

and erroneouſly conſidering lime as a manure, in place of a ſtimulus, much money has been unneceſſarily expended upon this article, and many attempts to improve, rendered unſucceſsful.

One gentleman has been rather more fortunate than his neighbours; for an experiment upon a clay field, with him, turned out well. But, mark the extent of his experiment. He thinks it of as much uſe the ſecond year as the firſt, and even of ſervice the third! We would ſay, in anſwer to this, that it is of more ſervice the ſecond year than the firſt, being then intimately mixed with the ſoil; and that its effects, under a proper ſyſtem of management, will remain undiminiſhed for *nine* or *twelve* years, and will be of uſe for a great deal more. No doubt, by applying the whip and the ſpur, it may be wrought out earlier, but this will only happen where improper farming is practiſed. A very ſenſible paper from the Reverend Dr Coke of Brookhill, cloſes this article, which deſerves the attention of the Nottingham farmers.

Paring and *Burning* does not ſeem a favourite practice with Mr Lowe, nor is it with us, but under certain circumſtances. When tough coarſe ſward is firſt broken up, no operation is equal to paring and burning, for bringing the land into ſufficient culture. Without doubt, under good management, no coarſe ſward ſhould be ſuffered; but before the whole kingdom is brought into proper order, we cannot join with thoſe who indiſcriminately condemn paring and burning.

Mr Lowe thinks weeding is not ſufficiently attended to, particularly in the clays, where very foul crops are to be ſeen. He ſeems to recommend the Bedfordſhire way of weeding beans with ſheep, which is a moſt ſlovenly cuſtom. Sheep may keep down the couch and annuals when the beans are young, without doing material damage; but, after the crops get to any length, they muſt be injured and broke over by the ſheep; and, what is worſe, the roots of the couch being firm in the ground, and not previouſly looſed by the horſe or hand hoe, muſt, by the time the ſheep are removed, have acquired ſuch ſtrength, as to prevent them from being afterwards extirpated.

Our author's opinion concerning the *Commutation of Tithes* is rather novel. He objects to that meaſure, becauſe he thinks it would increaſe the burden upon the landed property. We ſhall quote his own words—

'But what weighs moſt with me is, that in this, and, I believe, moſt other counties, more tithes are paid by compoſition than in kind. Theſe compoſitions, from the deſire of clergymen to

to live well with their pariſhioners, and partly perhaps from habit, are much lower than the real value of the tithe. If, therefore, a general compenſation is to be fixed by law, which muſt neceſſarily be by underſtanding perſons upon oath, I apprehend much the greater part of the occupiers would, inſtead of being relieved, find themſelves charged with a much heavier expence than before; and, conſequently, inſtead of a general ſatisfaction, a general complaint would enſue.'

The chief argument which operates with us againſt tithes, is, that they are a tax upon induſtry, operating with greater ſeverity upon the active and induſtrious, than upon the careleſs and ſlovenly huſbandman. If they were commuted, this objection is at once removed; for the burden to the tenant would be no more than paying a part of his rent to the tithe-holder, and the remainder to his landlord. To the farming intereſt of the kingdom, it is a matter of no importance upon what principles they are commuted; whether at their full value, at a half, or any given rate. It is enough that they are fixed. When that is accompliſhed, the good farmer will have no partner to ſhare the fruits of his well-earned labours. If he has limed, manured, incloſed, and drained, at a heavy expence, and thereby doubled his crops, no man will have a right to claim a tenth ſhare of the produce of thoſe beneficial improvements. In a word, laying aſide every queſtion reſpecting the origin of tithes, the right of impropriators of all deſcriptions, the animoſity which their collection often occaſions;—we ſay, laying theſe things totally out of view, that a tax, which muſt neceſſarily riſe or fall according to the exertions of the perſon who has to pay, or the diſpoſition of him who is to receive it, muſt be founded upon improper principles; and that few meaſures of legiſlation would be more conducive to the internal proſperity of the country, than a valuation and commutation of tithes.

This work, upon the whole, though rather more conciſe than we could have wiſhed, diſplays a good deal of knowledge in the ſcience of Agriculture; but we notice, from the correſpondence, that the author has been ably ſupported by Sir Richard Sutton, Bart. who appears to have taken a conſiderable deal of trouble in collecting materials for his information.

N.

ART.

ART. III. *Travels through the United States of North America, the Country of the Iroquois, and Upper Canada, in the Years* 1795, 1796, 1797, *with an Authentic Account of Lower Canada: by the Duke* DE LA ROCHEFOUCAULT LIANCOURT. *Vol. I. Quarto,* 632 *pages.* London, *Philips, &c.*

SINCE the ſeparation of the United States from Great Britain, a variety of publications have iſſued from the preſs, deſcribing the ſoil, climate, and agriculture of America; but none of them, which have come under our inſpection, deſerve to be compared with the enlightened and circumſtantial work now before us. Influenced by liberal principles, and guided by a ſteady and capacious mind, the noble author has detailed his travels with ſuch preciſion and ability, that the public cannot fail to receive the higheſt gratification from the intelligent information he communicates.

The cauſes which induced the Duke de la Rochefoucault Liancourt to leave his native country, are well known, and reflect the higheſt honour upon his character. A ſteady friend to rational liberty, he warmly ſupported the reformation of the old French government, and took an active part in all proceedings of the National Aſſembly, in conjunction with many other eminent perſons, who, like him, experienced a bad reward. When obliged, after the affair of the 18th Auguſt, to emigrate from France, he employed his time and abilities in a ſuperior way to moſt of his brethren. The native benignity of his temper, and love of his country, reſtrained him from joining in the meaſures uſed for reſtoring the old government; and occaſioned him to travel into other countries, as a mean of inſtructing himſelf, and benefiting mankind.

At an early period, his Grace was fond of agricultural purſuits; and, when our countryman Mr Arthur Young viſited France, for the purpoſe of aſcertaining the ſtate of huſbandry in that country, he was received at Liancourt with open arms. Theſe two celebrated perſonages were equally fond of one another's company; the Duke being as eager to receive information concerning the rural economy of Great Britain, as to communicate particulars reſpecting that of his own country. In this publication he has ſhown himſelf an adept diſciple of the Britiſh touriſt, and diſplays equal diligence, and probably greater diſcernment, in the inquiries which he made in the courſe of his travels.

After reſiding five months at Philadelphia, for the purpoſe of procuring the neceſſary information to guide him during his intended journey, and where he cultivated the acquaintance of

ſeveral

ſeveral reſpectable gentlemen, many of whom were uſeful to him during his progreſs in the United States, the Duke ſet out on the 5th May 1795, in company with a young Engliſhman named Guillemard, who had been led to viſit America to obtain accurate information of the country. They travelled on horſeback, with one ſervant, which was certainly the beſt way of journeying, where roads are generally bad, and accommodation neither good, nor to be found ſo eaſily, as in many other countries. In this manner they proceeded up the Schuylkill, upon the banks of which a great deal of good land is to be found; and while the Duke attentively examined the farms, and inquired about the mode of their cultivation, his fellow-traveller appears to have been equally attentive to make mineralogical obſervations.

We make an extract from this part of the work, which will give a glimpſe of the preſent ſtate of huſbandry in the province of Pennſylvania.

'I was deſirous of being more accurately acquainted with the ſtate of agriculture and huſbandry about Reading, which, in Philadelphia, had been pointed out to me as the moſt perfect in all Pennſylvania, and I therefore wiſhed to converſe with one of the beſt informed farmers. Mr Evans had been named to me as ſuch. He ſuperintends and manages the farm of Angelico for Mr Nicholſon in Philadelphia, who bought it three years ago of Governor Mifflin. This farm, which lies three miles from Reading, on the way to Lancaſter, conſiſts of nine hundred acres, four hundred only of which have hitherto been cultivated, and fifty of theſe lye in paſture. From ſixty to ſeventy acres conſiſt of the fineſt meadows, ſome of which are ſown with clover. They are watered at pleaſure, partly by the Angelico, a ſmall brook from which the place takes its name, and partly by a very copious ſpring, which waters ſuch parts as are not within reach of the Angelico. The graſs is fine, ſtrong, and buſhy, and the only care taken of it conſiſts in a ſlight irrigation. The reſt of the land is under the plough, and produces wheat, rye, and buck-wheat, oats and Indian corn, but without any mixed rotation of crops. The land is of the beſt quality, being a rich clay, from twenty-four to twenty-eight inches deep. Some places are ſtony. More or leſs manure is laid upon the ſoil every three years. From four to five cart-loads of dung, about fifteen hundred weight each, are generally allotted to an acre; but the dung is far from being in a ſtate to anſwer the intended purpoſe. The produce of the firſt year, after the ground has been cleared, is twenty-five buſhels of wheat, forty buſhels of rye, forty buſhels of barley, eight buſhels of oats, twenty-five buſhels of Indian corn, per acre. It would produce conſiderably more, if the wood were felled in a more careful manner, and the ground ſom-

what deeper tilled. It is the cuſtom, and conſequently the general opinion, that the ground muſt not be ploughed deeper than four or five inches. I have converſed with Mr Evans on this ſubject, who could not help allowing that the above opinion is erroneous. He was entirely of my way of thinking; but it is the cuſtom, and that has more weight than the cleareſt reaſoning. Newly cleared land ſometimes produces better crops, after the ſecond and the third year's tillage, than at the firſt; and this generally happens when the ground has been cleared with ſufficient care. The uſual produce of this land is ten buſhels of wheat, twenty of rye, twenty of barley, forty of oats, and eighty of Indian corn. This diſtrict has not ſuffered from certain inſects, called *lice*, which occaſion ſometimes conſiderable miſchief to the crops; nor had the Heſſian fly much damaged the corn here. The ploughſhare is of iron; it has but one broad ſide, bent toward the right. It is ill contrived, and turns up the ground very imperfectly. Two horſes are able to draw the plough in a pretty ſtrong ſoil. The work of the farm is performed by five men, ſix horſes, and twelve oxen. Mr Evans's wife and children manage the buſineſs of the houſe, of a pretty conſiderable dairy, and of the poultry-yard, which is much better ſtocked with fowls than American farms uſually are. The butter, which is not conſumed in the houſe, is ſent in Winter to Philadelphia; but in Summer, they make good cheeſe, which is ſold for tenpence a pound. The corn is either ſold in Philadelphia or Reading. Mr Evans fattens ſome oxen; but their number does not exceed eighteen, though he poſſeſſes ſeventy acres of meadow land: theſe oxen, together with his twelve cows and ſix horſes, conſume almoſt all his hay, for he ſells very little. He keeps it in barns, and ſometimes in ſtacks made after the Engliſh manner, but ſo very badly, that they generally tumble down. Every acre of meadow, if mowed twice a year, yields from three to four tons of hay; and the price of this article was, laſt year, fourteen dollars a ton.'

The great and valuable ſettlement in Geniſſee, ſtate of Maſſachuſets, under the management of Captain Williamſon, is amply deſcribed. The Captain appears poſſeſſed of eminent talents for rearing up an infant ſettlement, and rapidly bringing a waſte country into an improved condition. Great progreſs is already made in this extenſive undertaking; and we obſerve with pleaſure, that the ſpeculation (for a ſpeculation it certainly was at firſt) will turn out advantageous to thoſe concerned.

After examining the ſettlements betwixt the old cultivated lands and the lakes, the Duke proceeded from Niagara to the province of Upper Canada; the preſent ſtate of which is fully deſcribed, and ſome ſpeculations hazarded upon its future condition.

dition. General Simcoe, the Governor, received his Grace like a fr end, and communicated much information reſpecting the plans he had in view for its improvement, in which, it would appear, he was rather croſſed by the Governor-general Lord Dorcheſter. The bounds of this newly cultivated province include all the country weſtward of lakes Erie and Ontario, not within the limits of the old province of Quebec, or Lower Canada; and the two provinces contain about 170,000 ſouls. From what is ſaid, it appears that theſe provinces hardly furniſh grain ſufficient for ſupplying the conſumption of the inhabitants, and that their eſtabliſhment is a very heavy burden upon Great Britain.

Being prohibited by the Governor-general from entering Lower Canada, his Grace was obliged to croſs the lakes, and travelled by way of Oſwego and Albany to Boſton. During this tour, when paſſing Saratoga, he expatiates upon the ſcenes which took place there, in the moſt animated language. Maſſachuſſets he deſcribes as being as much cultivated as France, and the country, within twenty miles of Boſton, as a continued village.

Leaving Boſton, his Grace viſited the province of *Maine*, and was kindly received by General Knox, who poſſeſſes an extenſive landed eſtate, known by the name of the Waldo Patent. An extract from the work will do juſtice to the General, who acted a conſpicuous part under General Waſhington, during the American war.

" In this territory, it ſeems to me that no perſon can fail to thrive, who poſſeſſes ſo eminently the qualities of intelligence, prudence, and activity, together with a ſufficient capital to lay out in improvements.

" Theſe neceſſary ſubdiviſions of his eſtate can only ſerve to make it all one ſcene of proſperous huſbandry, and abundant population, ſooner than the worthy owner could have otherwiſe expected. So much do I know of his character and talents, and ſo freely did he explain his plans to me, that I cannot but hope, as warmly as I ſincerely wiſh, the happieſt conſequences to his affairs, and to the country, to reſult from them both. At the ſame time, it ſeems to be indiſpenſably requiſite to their ſucceſs, that they be proſecuted with unwearied and unalterable perſeverance. At the diſtance of Philadelphia, and amidſt other buſineſs, it will be impoſſible to give the due attention to their advancement. A reſidence on the ſpot is abſolutely neceſſary. But, with this, attention and activity cannot fail to ſurmount every obſtacle; and the happieſt event muſt infallibly enſue. General Knox is fully ſenſible of all this, and has therefore retired from that public buſineſs, in which he was engaged

for five and twenty years of his life, with great honour to himself, and to which he generously sacrificed a part of his fortune. He has even resolved to decline attending the Winter meetings of the Legislature of the State of Massachusetts. Thus, from a successful career in political life, he turns himself to augment and improve a fair estate; in consequence of which, he may probably leave immense wealth to his family. Can a man know a past life of more agreeable retrospect, in connexion with future prospects more fair and promising?"

After travelling through New Hampshire, and passing two days with Mr Langdon, a gentleman of great influence in that state, the Duke again visited Boston, and proceeded by the way of Rhode Island and Connecticut to New York. The numerous towns on this coast, and the husbandry of the adjacent country, are judiciously described; and, among other observations on the state of Connecticut, we find the following:—

"Another law, long prior to the Revolution, obliges every seventy families in Connecticut, to maintain a common school for eleven months in the year. Reading and writing are appointed to be there taught. If the number of families be under seventy, they are then obliged to maintain their school only for six months in the year. Every town forming a regular incorporation, must keep a grammar school, in which English, Latin, and Greek, are to be taught. The different societies are to name, each, a deputation to visit and regulate the schools. For every *thousand* dollars of taxation to the state, *two* dollars are to be paid for the support of the schools. The teachers have salaries proportioned to the taxation of the districts to which they belong. Towns, or communities, entrusted with particular funds for the support of the schools, can receive no interest from those funds, while they delay to erect the schools for which it was destined; and lose the principal, if they shall attempt to divert it to any different purpose. Towns or parishes, having no *foundation* for schools, must either support their schools entirely out of the appointed tax, or must at least contribute one half of the means for the maintenance of these schools; while the parents, whose children are educated in them, pay the rest. In very populous towns, the support of the schools continues to be left to the inhabitants.

"It is provided by law, that the select men shall in every town take cognizance of the state of the schools. Upon their reports, and in the proportions in which these declare the salaries to be respectively deserved, the towns make payment of the money which has been levied for the teachers. Where there are no schools, or but very bad ones, the proportion of the tax is withheld, in order that it may

may be beſtowed, where it has been better earned. There is, however, no inſtance of a town or pariſh remaining negligently without a ſchool. Many communities maintain their ſchools for a greater part of the year, than they are, by law, obliged to do. The ſelect men, and the deputations from the communities, manage the farms, and other revenues of the ſchools.

"The teachers are commonly young men from the colleges, ſtudents of law, or theology. Their ſalaries are, at the pleaſure of the different pariſhes, from two to three hundred dollars. Almoſt all thoſe who now act a diſtinguiſhed part in the political buſineſs of New England, began their career as teachers in theſe ſchools; a ſituation that is accounted exceedingly honourable. Sometimes, where the ſalary is ſmall, women are choſen to be the teachers. Even theſe muſt, in this caſe, be well qualified to teach reading, writing, and arithmetic.

"Every county muſt have a ſchool for Greek and Latin. A fine of three dollars is exacted from parents neglecting to ſend their children to ſchool. The ſelect men have authority to levy it.

"One natural conſequence, from the careful obſervance of this law, is, that hardly a perſon can be met with in Connecticut, any more than in Maſſachuſſets, who is not qualified to read, write, and perform the common operations of arithmetic; and that the general manners are better, the laws more faithfully obſerved, and crimes more rare, here, than in other places."

Paſſing through New York and New Jerſey, the noble author terminated a journey of ſeven months continuance; "on which," he ſays, "I cannot reflect without pleaſure, and, in the courſe of which, I found few things, but ſuch as I have had occaſion to mark with approbation."

The journey through the ſouthern ſtates was delayed till the month of March: on the 24th of which month, the Duke took ſhipping at Philadelphia for Charleſtown in South Carolina; and, during the paſſage, obtained much previous knowledge of the country from Mr Pringle, attorney-general of that ſtate, who was his fellow paſſenger. After examining South Carolina and Georgia, he proceeded to the Spaniſh ſettlements of Eaſt and Weſt Florida; a deſcription of which concludes the performance.

The huſbandry of theſe ſtates is of a quite different nature from that of the northern ſtates. Property is in much fewer hands; and farm-work is chiefly performed by negro ſlaves. Rice is the principal object of cultivation, though it appears to be not only hurtful to the health of the people, the ground

being always kept in a ſwampy condition, but alſo the leaſt productive article in Carolina.

We cannot take leave of this work, without expreſſing the high opinion we have formed of the talents and abilities of the noble and worthy author. Born to figure in a different line than ſurveying the huſbandry of any country, it muſt excite ſurpriſe, that his mind could, at once, accommodate itſelf to undertakings of this nature; and ſtill more, that he was able to preſent to the public, a detailed account of the political, commercial, and rural œconomy of America, which few can equal, and which none will excel.

The preface by the Engliſh tranſlator, though generally liberal, contains ſome things which we earneſtly wiſh had been left out. Few perſons will object to the performance, becauſe the Duke conſtantly diſplays an ardent affection for his native country; nor will many be diſpoſed to find fault, becauſe he refrained from imitating the conduct of CORIOLANUS, when he was forced to fly from the land which gave him birth. He has certainly acted a much more noble part, by employing the years of his baniſhment in gathering materials for the preſent work; which, we truſt, will hand his name down to poſterity with renown, while the actions of many other perſons in his ſituation, will be conſigned to oblivion, or recorded without applauſe. N.

PART

PART III.

AGRICULTURAL INTELLIGENCE.

THE year 1799 will long be diſtinguiſhed in the annals of this country, as remarkably unfavourable to the operations of huſbandry; and it is with much regret that we open this department of our work at ſuch an eventful period. Circumſtanced as we are, it is our duty to ſtate facts, however diſtreſſing the narration may be; for a different conduct would not only be unproductive of the ſmalleſt advantage, but might lead the public into a liſtleſs and fatal ſecurity, and prevent the neceſſary meaſures from being timeouſly uſed for procuring additional ſupplies, and for ſupporting the induſtrious poor, who are unable to purchaſe proviſions at the preſent ſcale of prices.

Before we detail the different articles of intelligence communicated to us, it appears very neceſſary to give a ſhort view of rural economy during the laſt year. Imperfect as this haſty ſketch muſt be, conſidering the variety of ſoil, climate, and practices of Great Britain, we judge it may be of ſome utility. If it does not add to the ſtock of information already in the poſſeſſion of our readers, it muſt at leaſt be acceptable; as it brings into a ſmall compaſs the ſeveral circumſtances which contributed to produce the preſent manifold diſtreſſes.

At the concluſion of the preceding year, a brighter proſpect was ſeldom preſented to the farmer. The fallows were completely wrought. The wheat fields, which were univerſally ſown in excellent condition, were covered by the fineſt and cloſeſt braird. The ploughing for Spring grain was far advanced; and, in a word, every operation of huſbandry had been executed in ſuch a manner, as afforded good cauſe to expect they would be crowned with a rich and abundant crop. The firſt reverſe of this pleaſant proſpect was experienced in the months of February and March, from a long and ſevere ſtorm of ſnow, which was ſucceeded by rainy weather, and occaſioned a large proportion of beans and oats to be put into the ground while it was in an unfavourable condition. Heavy rains about the firſt of May likewiſe retarded the ſowing of barley, and in a great meaſure ruined the furrow drills of beans upon the wet and heavy lands.

Yet all theſe circumſtances would not have occaſioned a bad crop, though a later harveſt than uſual would neceſſarily have been the conſequence. The dry weather, from the middle of June to the end of July, produced a moſt ſurpriſing

alteration upon the fields; and, if it had continued another month, a plentiful return might have almoſt been inſured to the farmer. We have ſeldom obſerved a better appearance of wheat upon the ground, than what was then to be ſeen. The greater number of fields were bulky, the ear was generally of a full ſize, and all that was wanting was a ſufficient quantity of heat and ſun to bring the crop to maturity.

Theſe beautiful proſpects, however, were ſoon over-clouded, and the fields, inſtead of a healthy vigorous colour, aſſumed a complexion which ſeriouſly affected every diſcerning mind. About the beginning of Auguſt, heavy rains, accompanied with cold eaſterly winds, reduced the ſummer-fallows and turnip fields into a perfect mire, half rotted a great part of the hay, ſtopped the growth of the ſecond crop of clover, laid down all the ſtrong corn, and effectually prevented the wheat from filling; as that grain cannot arrive at perfection, if loaded with moiſture at that ſtage of its growth.

The month of September was, on the whole, rather worſe: indeed, the ſtrong corn lay ſoaking among water during the greateſt part of it. Much of the wheat, from the exceſs of moiſture, died at the root before the ear ripened; and the ſtraw got a grey colour, from the perſpiration of the ſtalk being prematurely ſtopped; and, when cut, had an appearance ſomething like as if it had been kiln-dried. The people, in general, were by this time convinced that the grain would neceſſarily be of inferior quality; but few believed that it would be ſo defective, in every reſpect, as facts now unequivocally ſubſtantiate.

Oats, which are a hardy grain, ſuffered leſs under theſe unfavourable circumſtances, and promiſed at one time to be generally a medium crop. This has turned out to be the caſe upon the dry ſharp ſoils; but thoſe of a different deſcription did not eſcape ſo well; and, upon the high grounds, they were nearly deſtroyed by two ſevere nights of froſt on the 16th and 17th October. Some beans are ſaid to have been alſo injured at that time; but we believe that the loſs of this grain will be very trifling, as they are uſually ſown upon deep rich lands.

We deem it unneceſſary to enter further upon the ſubject, in this leading article; but ſhall proceed to detail the different communications tranſmitted to us. We only add, that we ſhall be much obliged to any gentleman, who has kept a regiſter of the weather during the paſt year, who will be kind enough to favour us with a copy; and, if accompanied with monthly remarks on the ſtate of rural economy, it muſt prove highly uſeful. Such a regiſter will not only inform the preſent generation, but muſt alſo prove very intereſting to poſterity.

rity. We need hardly ſay, that if ſimilar information could be procured, concerning the cauſes which occaſioned the ſcanty crops at the end of the 17th century, traditionally called the *barren years*, it would be acknowledged as a particular obligation.

Before we conclude this article, we muſt remark, that it gives us ſenſible pleaſure to notice the great degree of attention ſhown to the diſtreſſes of the poor, not only in the capital and other large towns, but alſo in many country pariſhes. While we heartily commend theſe philanthropical exertions, and wiſh them extended over the whole iſland, it cannot be improper to ſuggeſt, that the moſt ſucceſsful method of aſſiſting the poor, is by ſelling them meal at reduced prices, the reduction to be in proportion to the ſize of their families, and their ability to work. If donations of coals are added, the poor might paſs through this calamitous ſeaſon without ſuffering more than they undergo every Winter, provided meal, which is the ſolid national food of Scotland, is afforded them at ordinary prices.

EXTRACTS FROM PRIVATE CORRESPONDENCE.

SCOTLAND.

Edinburgh, 12th November 1799.—Old Hallow Fair was numerouſly attended this day, the greateſt part of farmers in the adjoining counties, from the lateneſs of the harveſt, being ſtill unprovided with their Winter ſtock. Lean cattle were inferior in numbers to the demand, and of courſe ſold at higher prices than they have brought for ſome time paſt. Few fat beaſts were preſented: but a new ſet of purchaſers appeared, who ſeemed, from the choices made, to be little verſant in the buſineſs. Theſe were people of the place, who wanted to lay in their *marts*; a practice which, though anciently very common, has for ſeveral years been in deſuetude. We are very apprehenſive, from the quality of the beaſts generally purchaſed, moſt of them being only fit for the ſtraw-yard, as well as the ignorance which muſt neceſſarily prevail reſpecting the ſalting of beef, in a ſufficient way for preſervation during the Winter months, that this new claſs of cuſtomers at Hallow Fair will not make their appearance next ſeaſon.

The ſhew of horſes was below mediocrity; and, as uſual, the inferior ones were quite a drug. Good horſes ſtill bring a full price; but, from the wetneſs of the ſeaſon, and bad food lately received, there is cauſe to believe, that thoſe of the firſt deſcription will not be ſo plenty for ſeveral years.

Sheep were rather lower, though the fall upon them is leſs than upon cattle. Good Highland ſheep, fit for laying upon turnips, may be conſidered from 1s. to 1s. 6d. lower than laſt year. The *dead* market is overſtocked with inferior kinds, and will be ſo for a little time.

Inverneſs, Dec. 10.—The harveſt in the northern counties has been backward and unfavourable; but, upon the whole, I believe we have been fully as well off as the ſouth of Scotland, and the greateſt part of England. The wheat crop with us may average ſeven bolls per acre, and weighs from 52 to 58 lb. Linlithgow firlot. Barley will not be much ſhort of an average crop in point of quantity, but the quality is far from being ſo good as uſual; and as for oats, they are defective in every reſpect, and will hardly be equal, in my opinion, to the conſumption of the county. Wheat ſells here juſt now at 38s. and 40s. per boll. Barley 28s. and 30s.; in other places, 21s. and 25s. I do not imagine any oats or peas are yet ſold in the neighbourhood at poſitive prices: but oat meal has not exceeded 24s. per boll of 9 ſtone Amſterdam weight. Lean cattle have been lower ſince laſt September, than at any period for ten years back. They rather ſeem now on the riſe, but none can be drove ſooner than the Spring months. Beef and Mutton, of the beſt quality, ſold lately at 2½d. per lb. in quarters; principal pieces at 3d.; but is now advanced 1d. the lb. weight, and will probably ſoon experience a further riſe. Hay ſells at 1s. per ſtone, and, if the Winter continues open, I hardly think it will exceed that price.

Edinburgh, Dec. 10.—The Magiſtrates of this city have given notice, that, after various conferences with the incorporation of bakers, they have reſolved, with the approbation of the Lord Preſident, and other Lords of Seſſion, to diſpenſe with ſetting any aſſize from and after this date, till further intimation is given.

This reſolution of the Magiſtrates deſerves the thanks of every well-wiſher of the community, as being the only method, under the preſent circumſtances, to procure the inhabitants a regular ſupply of good wholeſome bread. Every perſon of common diſcernment will acknowledge, that a pound of bread, baked from the produce of this year's crop, is of much leſs value than the ſame quantity manufactured from that of the preceding year. The ſuſpenſion of the aſſize will therefore place matters on their natural footing; for the comparative value of the ſtaff of life, like every other commodity, ought to be aſcertained in direct proportion to its quality.

We alſo obſerve, that ſtandard wheaten bread, ſuch as is ſold in London, is advertiſed by our bakers, the preſent price of which is 1s. 2d. per quartern loaf.

Edinburgh, Dec. 14.—The firſt PUBLIC KITCHEN, for the Poor of the city and ſuburbs, was opened this day; and we are happy to hear that a ſecond Kitchen is in preparation. A conſiderable ſum of money has been raiſed by ſubſcription, for promoting this benevolent

nevolent object; and it gives us pleasure to add, that the Concerts given in the Assembly Rooms, George-Street, for the same purpose, were remarkably well attended. The Sieur Herman Boaz has likewise given an exhibition of his wonderful performance, for the benefit of the fund, at which twenty guineas were collected.

By letters from Glasgow and Perth, we are informed that subscriptions have been opened in these places for the importation of corn from abroad.

Dunse, Dec. 21.—A considerable quantity of corn in the district of Lammermuir still remains in the fields, and, it is to be feared, will be of very little value. Indeed, the crop, in general, in this county, does not promise to have great effect in keeping down the markets.

Glasgow, Dec. 21.—American wheat is selling here at 57s. to 58s. per boll. Dantzick, 56s. to 60s. New north country wheat, 42s. Barley, 30s. to 32s., but poor in quality; and oats of this country growth, from 22s. to 26s.—all per Linlithgow measure. Old beans, 36s. to 38s. New ones, 28s. to 30s. per Stirlingshire measure. Oat-meal, 30s. to 32s. per boll of 8 stone Dutch or Amsterdam weight. The quartern loaf of bread is 1s. 4½d.

The Clyde being already shut, and every appearance that the canal will soon be frozen up, gives us small prospect of a decline of prices for some time hence.

Haddington, Dec. 27.—The weather, during the past quarter, has been unfriendly to every object of rural work; and the operations of the farmer have not, in the memory of man, been carried on at greater trouble and expence. It was near the beginning of October before a general harvest commenced; and many farmers had last year finished, by the time they this season put a sickle in the crop.

Notwithstanding these disastrous circumstances, there is cause to believe, that a great part of the district has escaped as easily from the consequences, as any other in the kingdom. Wheat, however, is worse, both in quantity and quality, than was ever known, being small in the grain, thick in the husk, and much of it unsound. Perhaps it is not equal, in point of consumption, to the half of crop 1798, and 15 per cent. at least inferior to the crop 1782, which encountered a season something similar to the last.

With respect to barley and oats, they have often been known, upon good lands, in former years, as defective as the present crop; but it is upon the high exposed situations where these grains (chiefly the last) are most below an average. Wherever they were not fully ripened when the frost set in, they are worst, and the extent of the deficiency is in direct proportion to the stage of their growth when the frost took place. The wet weather in April, which happened immediately after the generality of oats in the low district were sown, prevented those in the high districts from being

put

put into the ground till near the end of the month; and this circumſtance, together with the unfavourable condition of the ground when they were ſown, contributed to throw them very late, and in the way of meeting with the injury which afterwards befel them.

Peas, taken by themſelves, may be viewed as no crop. In many places, they are not worth the expence of thraſhing, and few farmers will have a return exceeding the quantity ſown. Tares are equally defective; but beans, eſpecially where they were free of peas, and not damaged by the wetneſs in ſeed time, may be conſidered as approaching to ſomething like an average crop.

Oats, from what is already ſaid, may be conſidered as mealing very unequally. The very beſt do not exceed meal for corn, and very few come that length. The generality of low country grain, properly got, may be ſtated as yielding 14 pecks, or 7 ſtone Amſterdam weight, per Linlithgow boll: Farther ſouth, they yield much leſs; ſome not more than 6 to 8 pecks of meal to the boll of oats.

The weight of grain upon a farm in the lower diſtrict, taken this week, is,

Good white wheat -	59¼ lb. Avoirdupois.
Ditto red - -	58
Barley - -	70
Oats - -	61
Beans - -	57¾

Laſt year, upon the ſame farm, the weight was,

White wheat .	63½ lb.
Red ditto - -	66
Barley - - -	79
Oats - - -	63

Prices have been, and ſtill continue, vaſtly diverſified. Indeed, it is a difficult affair to ſay, what is the comparative value of a good deal of grain; and this diverſity will prevail through the year, though it muſt leſſen after the corn is ſufficiently dried. New wheat ſells from 30s. to 50s. per boll; very little old now to be got. Barley, 25s. to 34s. Oats, 18s. and 31s. Of peas and beans little can be ſaid, as very few of theſe grains have as yet been offered for ſale. A correct ſtate of yeſterday's market, given at the concluſion of this article, will place the ſcale of prices in a clear light.

Turnips, upon the whole, are indifferent. Indeed, half a crop is this year accounted a good one. The greateſt part are not equal to a third of an ordinary crop; and, upon lands not in high condition, they are worth very little. Potatoes are ſtill worſe, yielding not only little produce, but are inferior in quality. The beſt ſoils have ſcarcely given a third of the uſual quantity, and, upon

upon wet lands, the crop was, in many places, not worth the taking up. They are already ſelling at 14s. per boll of 16 pecks, 26 lb. Amſterdam weight, each; and apprehenſions are entertained, that there will be a ſcarcity of healthy ſeed for the next year's planting.

Hay is ſcarce, and already ſelling from 16d. to 20d. per ſtone. A very great part of the crop was conſumed, during the Autumn, by farm horſes, as green food was in many places not to be had, and the peas and beans were ſo late. Straw is likewiſe advanced to double price; but little of this article, from the nature of the leaſes, can in ordinary caſes be ſold.

Lean cattle, which were low at Falkirk, roſe much at the after markets; and a ſmaller quantity than uſual is wintered in this county. The crop being, on the whole, of leſs bulk than common, and the fodder bad, are the cauſes why a ſmaller number are taken into the ſtraw yard.

The market has been fully ſupplied with fat ſtock for ſome time paſt, but a good part has rather been of an inferior quality. The failure of turnips, and the ſtoppage of the diſtilleries, neceſſarily brought a great number to ſale, which would otherwiſe have been put to the ſtake; but this extra quantity being now in a great meaſure removed, there is a probability that a ſcarcity will ſoon be felt.

A very ſmall proportion of wheat has been got ſown, perhaps not the twentieth part of what was intended; and if the Spring months are not very dry, few farmers upon the clay lands can ſow a peck with advantage. Many of the Summer fallows remain undunged, and ploughing was never farther behind. The working horſes, from wet weather, heavy work in bringing home the crop, and badneſs of food, are generally in a worſe condition than uſual, and, from the expence of *keep* it is highly probable, that they will not much improve during the Winter months.

On Wedneſday ſe'ennight, the weather materially changed, and we have ſince had ſome heavy falls of ſnow, attended with froſt, which has in a manner ſtopped all operations in the field, unleſs it be the driving of dung. A few people have ploughed, but they have done more hurt than good, by touching the land in ſuch improper condition.

Haddington Corn Market, Dec. 27.—We had a pretty full market of wheat this day, for the ſeaſon; there being 350 bolls expoſed, which, ſince the new crop appeared, have been fully adequate to ſupply the demand. Laſt year, during the Winter, we ſeldom had leſs than 500 bolls, one day above 700 bolls; but ſuch a quantity would, at this time, ſcarcely find purchaſers. Whether this circumſtance proceeds from a reduced conſumption, or from the Weſt-country dealers receiving ſupplies from other quarters, we cannot aſcertain, though probably both contribute to leſſen the uſual demand.

Oa

Of the above quantity, 260 bolls, by the market liſt, were only ſold; but it is ſuſpected that ſome may be ſold, and not entered in the clerk's book; and that a part of what is originally *ſet up*, is ſold privately after the concluſion of the market. The prices were:

2 bolls old	62s.	6 bolls	38s.
3 bolls ditto	60s.	8 bolls	37s.
6 bolls new	48s.	14 bolls	36s.
10 bolls	47s. 6d.	6 bolls	35s.
9 bolls	45s.	9 bolls	34s.
5 bolls	44s.	5 bolls	33s.
9 bolls	42s. 6d.	9 bolls	32s. 6d.
46 bolls	42s.	10 bolls	32s.
16 bolls	41s.	11 bolls	31s.
33 bolls	40s.	9 bolls	30s. 6d.
8 bolls	39s.	26 bolls	30s.

The average price of the whole was 1l. 18s. 6d., being 1s. $3\frac{4}{12}$d. lower than laſt market day.

The utility of a market liſt is univerſally acknowledged, and Haddington is the only place in Scotland, where the *real* price of wheat can be fairly calculated. It would be a deſirable meaſure, were the Magiſtrates, or the Juſtices, to extend the appointment to the other markets, which might be attained by an additional clerk, or by having the markets at ſeparate hours.

Barley may be ſaid to have remained ſtationary for ſome weeks; prices were from 27s. to 33s. 6d. Oats ſold well, eſpecially thoſe of good quality, which indeed are not numerous. Beſt price 31s. 6d.; but a great many of bad quality have lately appeared in the market, which of courſe have been ſold at various prices. Old peas were as high as 36s., and new peas and beans were ſold from 20s. to 30s.; but a full ſupply of this article has not yet appeared.

Mid-Lothian Quarterly Report.

From the long continued courſe of inclement weather, previous to the laſt quarter, it was anxiouſly hoped, that it would have proved more favourable to agricultural operations; and thus, in ſome degree, have counteracted the preceding ungenial ſeaſon. In this, however, "the hope of the huſbandman has failed" as completely as before. The month of October was occupied by the farmer almoſt wholly in cutting down, and gathering in, under every unfavourable circumſtance, the ſcanty product of a greatly damaged crop; while the *wheat-ſeed*, and the *early fallow*, were unavoidably poſtponed to an opportunity better adapted to theſe works. November followed with the ſame forbidding aſpect; and now December, clothed with ſnow, puts a finiſhing hand to the operations of the year, leaving, at the leaſt, two thirds of the *wheat-land* unaccompliſhed, while a portion (not inconſiderable) of the crop in the muirlands is ſtill expoſed to the Winter ſtorm.

The

The prices of grain, hay, and ſtraw, have of courſe been ſtrongly affected with theſe untoward circumſtances, and have reached to a height, particularly the laſt, unparalleled in modern times; and, as we have every reaſon to believe that this has ariſen ſolely from the calamity of the caſe, it muſt render the moſt rigid economy, in the uſe of the neceſſaries of life, together with the utmoſt poſſible exertion to procure a ſupply from abroad, more urgently neceſſary now, than at any period for a hundred years gone.

The following have been the average prices of good grain, &c. for the laſt three months:

	October.		*November.*		*December.*	
Buſh. 1000 parts.	s.	d.	s.	d.	s.	d.
Wheat per boll 4 114 *	38	0	36	6	42	0
Beans ditto do. do.	25	6	32	6	32	8
Barley ditto 5 962	26	6	29	6	32	0
Oats ditto do. do.	25	0	26	0	28	0
Oat meal per peck of 8 lb. Dutch	1	11	2	0½	2	1½
Potatoes per peck, about ¼ cwt.	0	10	1	0	1	0
Beſt beef per lb. of 17½ oz.	0	5½	0	5	0	5½
Hay per ſtone of 22 lb. avoird.	1	1	1	4	1	9
Oat ſtraw per kemple of about 15 ſtone hay weight	12	0	14	0	15	6
Wheat ſtraw ditto for litter	8	0	10	6	10	0

From a Mid-Lothian Farmer.

December 28.—I conſider that a comparative view of crop 1799, with that of the preceding year, may be arranged as follows:

Wheat, as one third deficient.
Barley, ditto.
Oats, three eighths ditto.
Bran and Peas one half ditto.
Potatoes, two thirds ditto.

Wheat will weigh, upon an average, per firlot, 56 lb. Barley 66 lb. Oats 57 lb. There is not one third of the uſual quantity of wheat ſown, and ploughing is much behind.

The produce of what we call good oats for the ſeaſon, will be from 11 to 13 pecks of meal. Oat meal ſells at 2s. 2d. Peas ditto 1s. 7d. Bear ditto 1s. 6d.—all per peck of 8 lb. Dutch weight.

We have juſt received from London a copy of Sir John Sinclair's Propoſals for eſtabliſhing a Joint-ſtock Company of 1600 ſhares of 50l. each, for the purpoſe of carrying on Experimental Farming,

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* This is the average of OLD and NEW together; the beſt old being about 4s. higher than average.

Farming, and planting waſte lands. Want of room prevents us from inſerting the propoſals in this Number, but they ſhall be given in our next, together with ſome obſervations from a correſpondent. Such a public-ſpirited eſtabliſhment deſerves every encouragement; and we truſt it will meet with the ſame liberal ſupport as Sir John's patriotic plans have hitherto experienced.

ENGLAND.

Doncaſter, October 23.—Our harveſt is in a ſad ſtate, moſt of the wheat and barley have been badly carried in; and as for the oats and beans, they are too green to admit of an idea of ripening, though they are cutting them in order to get them off the ground. The Summer fallows are in a moſt wretched condition; and much of the flat land towards Hull is under water. Wheat is conſidered as the worſt of the grains; and the general opinion is, that three buſhels will not produce more flour than two did laſt year.

Stafford, Nov. 4.—The oldeſt perſon in this county does not remember ſuch a bad harveſt; many of my neighbours have not yet finiſhed, and what they have got in is moſtly ſpoilt. Upon the eſtate where my farm is ſituated, we uſed to be all over by the end of Auguſt; and, this year, it was the middle of October before we got done. I had many acres of barley on the ground for two months; and as it rained the moſt part of the time, you may eaſily judge what condition it is in. Grain of every kind, that is good, is now ſold at moſt extravagant prices. Laſt market day, wheat ſold at 15s. per buſhel, barley 7s. 6d., oats 6s., beans 12s. Our meaſure is 38 quarts to the buſhel.

The hay harveſt was equally bad. I had one meadow of fine hay carried off by the floods. Turnips have failed, which will be a bad affair for ſtock.

Lincoln, Nov. 12.—The harveſt in this county is nearly completed, and the prices of grain are rather lower than when I wrote you laſt. Oats are from 15s. to 34s.; barley 30s. to 44s.; wheat 50s. to 80s.; beans 36s. to 48s. per quarter of 8 ſtrikes or Winchеſter buſhels. Our crops of wheat are much lighter than uſual, and ſo are oats; but barley is tolerable, and may produce three quarters per acre on an average; beans about two quarters. Upon the whole, I think our crop is one third leſs than uſual.

Turnips are but a ſmall crop, though full as good as previous appearances led us to expect. Fat cattle reduced in price; and beef ſells from 3s. 6d. to 5s. per ſtone of 14 lb. avoirdupois, according to quality.

You may be aſſured every aſſiſtance in my power will be given to the Farmer's Magazine, which promiſes to be an uſeful work. The chief improvement practiſed in this county is, embanking and draining low lands, and marling or claying wild ſands, or loamy

loamy grafs lands. Particulars concerning thefe improvements, I fhall fend you afterwards.

Pontefract, Nov. 18.—Fat cattle have been plentiful for fome time paft, and the markets dull; but within thefe few days a confiderable advance has taken place. They are felling now from 5s. 6d. to 8s. per ftone, finking the offal. Sheep not rotten, but a great deal of them very poor. Our corn crops very indifferent. Wheat prefents a bad fample, being moftly fprung. Barley and oats no better, and all very deficient in quantity. Prices faft rifing. On Saturday laft, old wheat fold here at 15s. per bufhel, new 12s. 3d. Old oats 6s. 3d., new 4s. 3d. Barley 5s. 6d. Beans 10s. A profpect of bacon being very high; at Malton, it fells, green, at 6d. per lib.

Stafford, Nov. 30.—The weather, for this fortnight paft, has been more favourable, and I have got my wheat feed completed; though many farmers round me, from the extreme wetnefs of their lands, have not fown a bufhel. We have now begun to feed our cattle on turnips, to fave the hay; and they are turning out better than I expected; but, after all, they are not above half the fize of laft year's growth. Markets for grain ftill keep up. Seventeen fhillings per bufhel was afked at our laft market for new wheat, but none would give it. I hope it will foon be lower, though, I aflure you, this has been a moft trying and expenfive feafon to the farmer. Cheefe has alfo rifen to an extravagant price, and the Government factors are bufily purchafing. Beef, mutton, and pork, fell from 4d. to 4½d. per lb.

Lynn, December 3.—Harveft here has been ill got, fome barley ftill in the field; but, generally fpeaking, the crop is fuppofed not to be fo unproductive as was at firft expected. Never was fo great a difproportion known in prices as this year. Wheat fold yefterday from 64s. to 100s. per quarter. Barley 28s. to 51s. Oats 18s. to 38s. No beans. The turnip crop has improved greatly of late, and there is now favourable weather for fowing wheat.

Wakefield, December 13.—Our markets for corn are very high, though they have rather declined for thefe two weeks back; but unlefs we have a large importation from abroad, it is the general opinion they muft foon advance. The beft informed merchants differ, whether any confiderable quantity of foreign grain can be procured. One principal houfe in London writes in the affirmative; while another, equally refpectable, gives a direct contrary anfwer. Barley is fo much injured by the rains, that it will not malt, which has caufed old malt to fell at 9s. per bufhel. The farmers are ftill fowing a little wheat, and a tolerable proportion has been got into the ground; but it has been harrowed fo extremely wet, that I fufpect a large proportion will periſh. Prices at our market this day—Wheat 70s. to 96s. Barley 35s. to 48s. Oats 28s. to 50s. Old beans 84s. 6d., all per quarter of 8 bufhels.

Northumberland

Northumberland Quarterly Report.

The failure of the wheat crop is general in this county; and moſt of the ſamples that have been preſented at market, are not ſo good as the hinder end or light grain of laſt year. The produce per acre does not exceed one half of what it ought to be, and, in many places, it is unfound or ſprouted.

Barley, upon dry ſoils, is a tolerable crop; but upon moiſt ones, it periſhed by two much wet. The maltſters complain that a great deal of it will not malt.

Oats, upon the vales or low grounds, are a medium crop. Upon the hills or moors, they are very bad; never ripened, and are nothing but huſks. Many of them were ſtill out in the laſt week of November and firſt of December. Some ſtill remain in the fields at this date.

Peas, abundance of ſtraw, but little or no grain.

Beans were very late, but would have been a medium crop, had not the uncommon hard froſt, on the 16th and 17th October, injured them. A field of beans, near Belford, is ſtill to cut; but the generality were got in during the laſt week of November.

Turnips, upon good dry ſoils, are a fair crop. Upon moſt ſoils, very bad; in many places, abſolutely worth nothing; the conſequence of which is, that decent ones are letting from 7l. to 9l. per acre.

Our cabbages are ſcarce any thing but leaves; few of them have a *core* much larger than a man's fiſt; the cold and wet entirely prevented them from cabbaging.

Of potatoes, that ſtaff of life to the poor, the account I have to give is ſtill more melancholy. They have not only failed in produce, but are bad in quality, and are now ſelling at three times their uſual price. Many were damaged by the froſt.

The proſpect for next year, in my opinion, is ſerious and alarming. In many places, ſcarce an acre of wheat is ſown upon the Summer-fallows, nor likely now to be ſown, unleſs a favourable ſeaſon happens in the month of February.

Prices.	s.		s.	
Old wheat	16	to	18	per buſhel Wincheſter.
New ditto	8	to	11	
Barley, new	5	to	6	
Oats, ditto	4	to	5	
Old peas	8	to	10	very little of either to be had.
Ditto beans	7	to	9	

The price of live ſtock depreſſed conſiderably in October laſt, but fat is now getting up. Beef and Mutton 5½d. to 6d. per lb. avoirdupois, and expected to be ſcarce in the Spring.

Lynn, Dec. 19.—The weather is now ſet in ſeverely, but, of late, it has been good, for the ſeaſon of the year; and the ſowing of

of wheat is finiſhed, a full quantity of which grain is got in. Laſt year's crop of wheat is not ſuppoſed to exceed two thirds of an ordinary one. Barley is by no means deficient in quantity, but ſo extremely injured by the rains, that ſcarcely one third of it will grow when put into the ſteep-ſtone.

Oats are not bad, but few are ſown in this county, and they are ill got this ſeaſon. Wheat ſells at preſent from 46s. to 90s. per quarter. Black or ſtained barley 18s. to 37s. Bright ditto 40s. to 60s. Average weight of wheat 55 lib. per buſhel. Laſt year it was 59½ lib. The price of a quartern loaf of bread here is 13½d.

Lean ſheep have been much reduced in price; but mutton ſells at 6d. per lib. All ſorts of ſtock are, however, rapidly riſing, and are expected much higher in the Spring, as it is probable there will be a ſhort ſupply. Potatoes are a bad crop; but there are not many planted in this county. Hay ſells at 90s. per ton.

Rape-ſeed is the ſmalleſt crop ever remembered; and we conceive that 1000 quarters would clear this county. The early got, is of fair quality; but the late crop is much injured.

From the great improvements in this county, by drilling, ſetting, and hoeing of corn, our crops are now ſo free of weeds, that they are leſs ſubject to hurt from bad weather than formerly; and when the open airy ſituation is taken into account, it is expected that our produce will be equal in quality to any other diſtrict in the kingdom.

Stafford, Dec. 21. The difference betwixt this crop and the preceding one, will be fully one third as to the quantity, independent of the great inferiority of the ſeveral grains. I think my wheat crop may average 20 buſhels per acre: but the meaſure we give, in this county, is 38 quarts; a practice ſanctioned by cuſtom, which ſuperſedes all law. Some of my barley, which was got in before the wet ſeaſon, may yield 40 buſhels. With regard to oats, we have not thraſhed any. Prices are rather on the decline. Wheat ſold laſt market from 14s. to 15s. per buſhel. Barley 7s. 6d. to 8s. Oats 5s. 6d. to 6s. Beans 13s. to 14s. As for peas, few will have a ſufficient quantity for ſeed.

The weather has been favourable of late for ſowing of wheat; and the major part of farmers are finiſhed. We have all been behindhand this year in our labouring, at leaſt two months farther back than laſt year. A part of the ground for Spring corn is ploughed, and ſome of the turnip fallows; but a change of weather has effectually ſtopped any more from being done for ſome time. I am fearful for the turnips; for, if they are injured by the froſt, I know not what we will do with our cattle. Hay is ſelling at 9l. per ton. Butcher markets are raiſed a halfpenny per pound; and there being few fat beaſts in the county, a farther advance is expected. Cheeſe is now three guineas per cwt. Butter 1s. 3d. per lib. Potatoes 2s. 4d. to 2s. 6d. per buſhel, which weighs about 74 lib.

Yorkſhire Agricultural Quarterly Report.

It is painful to report the harveſt, as by no means likely to be over before the commencement of the new year; a circumſtance almoſt unparalleled even in the coldeſt parts of the iſland. A conſiderable quantity of oats and beans have been but very lately, and very ill carried; and a great part of all ſorts of grain, that have been ſo ſtacked, is in danger of being heated and ſpoiled. The thraſhing has now generally commenced, with very unfavourable appearances; the wheat not yielding half the uſual produce in many inſtances, and that of an inferior quality. The barley, though of greater produce, is much complained of by maltſters; and they have found ſome, on trial, utterly incapable of being malted. The oats appear to have by much the greateſt deficiency. Of beans and peas, little have been thraſhed; yet a few ſamples appear in the market, better than might have been expected. This article is, in ſome inſtances, tolerably productive, though by no means a good crop.

Wheat ſowing, and fallows.—Theſe are in an univerſally backward ſtate on all ſoils. Some few pieces of clover, hay, &c. begin to look green, though the blade has ſprung very ſlowly. Many of the fallows on clay ſoils are in a moſt foul condition for ſowing; the bean and pea ſtubbles on thoſe ſoils are of courſe in a ſimilar ſituation. Many were ſtill ſowing wheat till the fall of the ſnow, and ſome with little proſpect of ſucceſs. Some of the wheat ſtubbles have received the Winter ploughing, preparative for the turnip fallow; the ſhortneſs of the days renders diſpatch almoſt impoſſible; but other grounds are laid up for the Winter in ridges, (ſkerballking), which may prove a good method, eſpecially in a ſeaſon like the preſent. This operation requires leſs time; the ſoil is completely open, and expoſed to the influence of froſt, &c.; and will be dry and fit for croſſing in the Spring, earlier than after a full ploughing.

Turnips and fodder.—Of turnips, there are ſome good crops; but they are obſerved to be quickly conſumed by the ſheep on the ground: the deficiency of after-graſs renders the recourſe to them rather too early for the ſmall ſtock of hay, &c. The latter crop of clover was of little value. If the Winter ſhould be inclement, the ſuſtenance of cattle will be a ſubject of anxiety.

Potatoes.—It is feared there will be conſiderable deductions from the ſcanty produce of this valuable root, cauſed by the many unſound ones among them, and their extreme moiſture when ſtored.

Hops, though not half a crop, will probably be found equal to the proportion of barley when malted.

Apples are plentiful and cheap, from the dearneſs of flour.

Prices

Prices of grain are declining, and perhaps may continue ſo for a few weeks. Beſt new wheat 12s. Barley and oats 5s. Beans 7s. per buſhel Winchester.

Cattle.—Fat cattle ſell well; but many half-fed ones are brought to market and ſlaughtered. Lean cattle are low. The ſame may be obſerved of ſheep.

Horſes.—Theſe animals are ſcarcely convertible to money, at any rate, except thoſe of ſuperior kind, which command good prices.

December 19.

London, December 23.——Markets for grain have taken another turn, and, owing to the apprehenſions entertained that the ſeverity of the weather will prevent us from receiving foreign ſupplies, and that the navigation of the river Thames will be ſtopped, our demand for wheat and oats has been greatly increaſed. At the Friday's market, the former advanced full 8s. per quarter; and this day, very few ſamples were preſented. Good oats are worth 50s. per quarter; but we have a great many very ordinary ones, which, unleſs upon a ſcarce day, can hardly be ſold. Beans and peas maintain the high price lately obtained, though our ſupply is large: and as fine barley comes ſlowly in, and is much demanded, there is not any fall upon that article.

Seeds, from the bad weather when they were ſaved, are vaſtly diverſified in quality and price. Red clover from 46s. to 130s. per cwt. White 30s. to 120s. Trefoil 16s. to 72s. Rye graſs from 30s. to 40s. per quarter. Turnip ſeed 30s. to 31s. per buſhel. And rape ſeed from 52l. to 54l. per laſt.

The total return of wheat ſold in Mark-lane, from the 9th to the 14th December, is, 7,164 quarters, and the average price thereof, 93s. 11d. The returns are given for the week preceding the time they are made up; though many of the newſpapers, particularly the Scots and provincial ones, preſent them in ſuch a way, as may lead the reader to think, they are the average of the laſt market day.

Average price of corn per quarter in England and Wales, for the week ending December 7th.

Wheat	94s. 2d.	Beans	64s. 3d.
Rye	56 7	Peas	57 4
Barley	45 5	Oat meal	58 8
Oats	38 8		

Beaſts, this day, in Smithfield, 1800. Sheep, 5500. Several oxen ſold at 100l. each.

Prices per ſtone of 8 lib. to ſink the offal.

	s.	d.		s.	d.		s.		s.	d.
Beef	3	0	to	4	8	Veal	4	to	5	6
Mutton	3	8	to	4	8	Pork	4	to	4	8

Average price of tallow, 4s. 1½d. per load of 8 lib.

The prize-ox purchaſed on Monday laſt, at the great price of 100 guineas, was exhibited to public inſpection in Fleet-Market. He was fed in Buckinghamſhire, and weighs nearly 300 ſtones, is 8 feet 11 inches long, 6 feet 7 inches high, and 10 feet 4 inches round the girth. At the Smithfield ſhew of cattle, he gained the firſt prize given by the Duke of Bedford and others.

Smithfield has been remarkably well ſupplied this laſt week with Chriſtmas beef, ſome of which ſold ſo high as 7s. 6d. per ſtone of 8 lib. One bullock was ſo fat, that he fell down on Blackfriars-bridge, where he was killed. Others were killed in the ſtreets, being unable to walk to the place of their deſtination.

The ſhew of bullocks and ſheep, was attended by the Duke of Bedford, Lord Somerville, and other amateurs. The Prize Society afterwards dined together: His Grace in the Chair.

Extract of a Private Letter from a Man of Buſineſs in London, dated December 23.

I have had an opportunity, this day, of meeting with ſeveral farmers, from the different counties round London, who attend our market, and have received full information concerning the ſtate of their crops, and the forwardneſs of their huſbandry, which I herewith communicate.

The crop of corn, in general, in the five counties of Middleſex, Eſſex, Hertford, Surry, and Kent, may be reckoned a fair average of ordinary years, as to quantity; but the quality of barley and oats, from being late, is much inferior to what is uſually produced. Wheat has been well got, and a great part is as fine as the growth of any year.

In *Middleſex*—Wheat was well got, and of fine quality. Of barley, only a ſmall proportion is fit for malting.

Eſſex—Part of wheat in the low country late, and not ſo well harveſted. Barley as before.

Hertford—Wheats all well got. Barley generally damaged.

Surry—Upon the high lands, all the crops well got; but in the low part of the country very badly. In ſome caſes, pigs were turned out to eat the barley in the fields.

Kent—Wheat in good order and condition. Barley but middling.

The oat crop in theſe counties was late, and indifferently harveſted; but the quantity of that grain ſown is but trifling. Beans, a good crop; but, from the wetneſs of the ſeaſon, they are not fit for uſe till kiln-dried.

The general weight of wheat of this crop is about 56 lib. per buſhel; ordinary 54 lib.; ſome fine ſamples are 60 or 62 lib.—The produce of fine-pickled ſamples, is nearly equal to laſt year's growth:

growth: Of middling and ordinary, the quantity of fine flour is much ſhort—ſay from one eighth to one tenth. Good barley, about 48 lib. per buſhel; beſt ſamples, about 2 lib. more; ordinary, 40 to 42 lib. Oats, on an average of ſound grain, 36 lib.; fine ſamples, 41 lib.; ordinary, as low as 30 lib. The number of good ſamples have been ſmall indeed.

It is the general opinion of every perſon converſant in the corn trade, that there is not a ſufficient quantity of grain in the country to ſupport the inhabitants till next crop, and that a conſiderable importation is neceſſary. Since the beginning of November, 70,000 quarters of wheat, and 50,000 quarters of oats, have been imported here: Only a few parcels of barley—ſay ſix hundred quarters. From the ſetting in of the froſt, no more foreign grain is expected this ſeaſon, except the cargoes upon the road. Conſiderable quantities are bought, which cannot be expected to arrive ſooner than April.

Smithfield has of late been well ſupplied. The general price of beef, ſinking the offal, 4s. 6d. per ſtone of 8 lib.; mutton, 4s. 10d. Retail prices—Beef and mutton, 6½d. and 7d. per lib.; veal, 7d.

The quartern loaf of bread is preſently ſold at 14d.; but, from the riſe of wheat and flour this week, muſt be advanced to 14½d. or 15d. Oat meal is worth 28l. per ton, which is equal to 14 bolls and a quarter, as ſold with you.

The wheat ſeed is generally finiſhed; though, in the wet lands of Eſſex and Hertford, ſome remains to be ſown. Ploughing is much behind.

Hay ſells from 4l. to 5l. 16s. per load, which is 18 cwt., or 90 ſtones, Scots weight. Straw from 1l. 18s. to 2l. 5s. per load of 13¼ cwt. Potatoes and other garden ſtuffs are plentiful. The price of the former, from 5l. to 8l. per ton, which is from 15d. to 2s. per peck, according to your meaſure. The quality is not good.

We have a ſevere ſtorm of froſt and ſnow, which, if it continues, will ſoon block up the Thames. The corn markets, in conſequence, experienced a conſiderable riſe. Dantzic wheat ſold on Friday as high as 110s. per quarter; and, this day, flour has riſen 5s. per ſack. Some remarkably fine cattle were laſt week ſhewn in Smithfield, in conſequence of a premium being given by ſeveral noblemen and gentlemen.

ADDITIONAL SCOTS INTELLIGENCE.

Angus, Mearns, and Aberdeen Agricultural Report.

This diſtrict, in common with the reſt of the kingdom, has experienced a moſt inclement ſeaſon, and vegetation was at no time luxuriant. Our crops are therefore ſcanty, ſo far as trials have been made;

made; and as for the paſtures, they remained ſhort and open, without acquiring their uſual cloſe pile.

In general, hay may be conſidered as approaching to a medium crop; yet the price has advanced to an unuſual pitch. The average may be ſtated at 1s. per ſtone of 20 lib. Dutch weight.

The wheats, at one period, had a full appearance, but were afterwards daſhed to the ground, which prevented them from filling, and, in many ſituations, occaſioned the grain to ſpring. Wheat is, I apprehend, the worſt crop, and may be ſtated as one half deficient. There has been little brought to market; the price from 30s. to 45s. per boll of 4 Linlithgow firlots.

On the ſtripe of fine land which bounds this diſtrict with the ſea, oats may be taken at nearly two thirds of the uſual product, and bear and barley nearly in the ſame proportion. But when we go to the hill diſtricts, they are much below what is ſtated; and the accounts are ſo various, that a concluſive opinion can hardly be formed. It is allowed, upon an average of the three counties, that oats will not yield 4 ſtones meal per boll. Thoſe raiſed upon the coaſt lands may be from 5 to 6 ſtones; ſome have even come to 7½ ſtones; but the quantity of the laſt kind is too trifling to merit notice.

In Angus, the price of barley, by the firlot of 32 Scots pints, is 25s. per boll. At Aberdeen, by their meaſure of 34 Scots pints, 28s., and advancing. Beer, or bigg, 2s. to 4s. lower than barley. Oat meal, 30s. and 32s. per boll.

In all the hilly parts of theſe counties, and even in ſome parts near the ſea, the oats were froſted, and conſequently unfit for ſeed, which, I am afraid, will be an article much wanted.

Turnips and potatoes felt the effects of the bad ſeaſon equally with other crops. The firſt were put wet into the ground, and in ſome places did not *braird*, and in others were cut off by the *fly*, or ſnail; for farmers have not as yet aſcertained the name of the animal or inſect that deſtroys this root. The quantity of turnip food does not exceed one third of laſt year's.

The lateneſs of laſt Spring reduced the condition of lean ſtock ſo much, that they never got forward during the after ſeaſon; and prices have been from 15 to 30 per cent. below thoſe of laſt year. We have little demand at this time; yet the ſpirits and expectations of our dealers are now much raiſed, and a buyer will pay 20 per cent. more than would have been demanded two months ago.

Fat cattle were lately 7s. 6d. and 8s. per ſtone; but they have now fallen a trifle. There are fewer than uſual upon turnips; but every perſon is forcing forward to market as faſt as poſſible. As is uſual when turnips are ſmall in ſize, there is a general complaint that cattle fatten very ſlowly.

Obituary.

OBITUARY.

July 22d 1799.—At Athelſtaneford, Eaſt Lothian, Mr JOHN THOMSON, farmer and fleſher in that place.

Mr Thomſon had arrived at the advanced age of 90 years, and, in the courſe of an extenſive and complicated buſineſs, had uniformly preſerved a fair and unimpeached character. He had riſen, from ſmall beginnings, to eminence in his profeſſion; and, at one period, his undertakings were more extenſive than any of his brethren out of the metropolis. Fifty years ago, under the patronage of the Gilmerton family, he ſet up a fleſh market in the village where he reſided; and his dealings as a middle-man, in the purchaſe of fat beaſts, ſheep, and lambs, which were reſold to the Edinburgh and Weſt-country fleſhers, were widely extended over all the county of Eaſt Lothian. When old age arrived, he wiſely contracted his buſineſs; but he retained his knowledge and accuracy to the laſt; and, from the natural ſtrength of his conſtitution, there was cauſe to believe, that, old as he was, a ſucceſſion of days awaited him, had not an unlucky fall in his room hurt him ſo much, as to haſten his diſſolution.

Mr Thomſon was much reſpected in ſociety, eſpecially in his own neighbourhood, which was a ſure proof of the goodneſs of his character. When not engaged in buſineſs, his chief amuſement lay in playing at whiſt, at which game he believed himſelf to be eminently ſkilful. In a word, he was a man, who had few or no enemies, and poſſeſſed more friends than moſt of his contemporaries.

At Little Harwood, Lancaſhire, Mr A. FRANKLAND, farmer.

At Waltham on the Woulds, Mr BURTON, ſenior, farmer.

At Crowmills, Leiceſterſhire, Mr JOSEPH LEWIS, grazier.

At Eaſt Dereham, aged 73, Mr H. WELLS, a celebrated kitchen gardener.

At Ugſtone, near Haddington, Mr THOMAS HOWDEN, an extenſive and reſpectable farmer.

At Carniehaugh near Gifford, Eaſt Lothian, Captain JOHN CARFRAE, of the Breadalbane Fencibles, and farmer there. Captain Carfrae had, at an early period of life, entered into the military line, and ſerved in Germany during the ſeven years war. He was the intimate friend of General Harris, the conqueror of Seringapatam, with whom he acted as an officer in the 5th regiment of foot, then commanded by Lord Percy. He afterwards devoted his attention to rural affairs till the year 1778, when he accepted of a commiſſion in the regiment raiſed by the Duke of Hamilton, and commanded by General Francis M'Lean. At the peace of 1783, he returned to his farm, which, during his abſence, had been managed by his ſiſters and friends. Experienced officers being much wanted when the fencible regiments were raiſed in 1794, he was prevailed

prevailed upon to accept a company in the 3d battalion of Lord Breadalbane's regiment. In Ireland, the ſervice was too ſevere for his conſtitution, which laid him under the neceſſity of viſiting his native land, in hopes that a change of air might be uſeful; but, alas! it was too late.

Captain Carfrae poſſeſſed all the ſocial qualities in an eminent degree, and was greatly beloved and eſteemed by his numerous friends. He was a good neighbour, an excellent companion, charitable to the poor, and much reſpected by all who had the pleaſure of being intimately acquainted with him.

At Edinburgh, Dr Joseph Black, one of his Majeſty's phyſicians for Scotland, and profeſſor of Chymiſtry in the Univerſity of Edinburgh.

The ſcience of Chymiſtry being intimately connected with Agriculture, it gives us pleaſure to learn, that an account of Dr Black's ſtudies will be given by a near relative, thoroughly qualified to judge of what merits the attention of the public.

Notes to Correspondents.

The Rural Inquirer, No. I. to be regularly continued, will be given in our next, together with *Letter Second from a Farmer upon a tour through England, to his friend in Edinburgh.*

Memoirs of *Mr Bakewell*, the celebrated breeder of cattle and ſheep, are in hand.

Materials are wanted for completing an account of *Scotiſh Huſbandry* at the union of the two kingdoms. A publication of Lord Belhaven at that period, is ſaid to throw much light on the ſubject. Any gentleman who has ſuch a pamphlet in his poſſeſſion, will confer a favour upon the publiſher, by indulging him with a reading of it.

A valuable eſſay upon the moſt proper method of *winning hay*, will be inſerted in our next number.

The publiſher is exceedingly ſorry that this number has unavoidably been delayed for a few days after the time fixed for publication. In future, every attention will be beſtowed to ſerve the public regularly.

The Second Number will be publiſhed on Monday the 14th of April.

Several valuable articles of intelligence, &c. from our correſpondents, are unavoidably left out of this number, for want of room, although an *additional half ſheet* has been added.

It is particularly requeſted that the Communications for our Second Number may be forwarded at fartheſt by the 19th of March, and articles of Intelligence by the firſt of April.

THE

FARMER's MAGAZINE:

MONDAY, APRIL 14TH 1800.

(No. II.)

PART I.

ORIGINAL COMMUNICATIONS

FOR THE FARMER'S MAGAZINE.

The Rural Inquirer, No. 1.

It would be an ingenious and useful object, to investigate the ancient state of husbandry in this country, and to trace out the various causes which have contributed to promote improvements in that important and necessary science. Perhaps, the field from whence *facts* could be gathered for such an investigation, is too sterile for producing satisfactory information; which might occasion, in many cases, conjecture and tradition to be substituted for positive evidence and written testimony. Be this as it may, we do not propose to undertake such an arduous task; but mean to devote this number of our inquiry to a short sketch of the substantial and valuable improvements made in Scotland since the Union of the two kingdoms; which are more extensive than in any other nation with which we are acquainted.

Before we enter upon this ſketch, a few words relative to the ancient ſtate of Scotiſh huſbandry may be neceſſary.

At a very early period, the Lowlands of Scotland were partially brought into a high ſtate of cultivation, and all the ordinary grains now in uſe were ſucceſsfully raiſed upon that portion of the ground then called *in-field*. The in-field originally compriſed a ſmall ſpace of land immediately contiguous to the farm-ſteading, or mains; and was afterwards gradually extended, as population and luxury increaſed, or as the means of improvement lay within the reach of the poſſeſſors. Hence, all the dry coaſtſide land, and the fields adjoining to great towns and villages, were earlieſt improved; while thoſe at a diſtance from manure, were generally allowed to remain in their natural uncultivated ſtate.

It may readily be ſuppoſed, that cultivation, in the firſt inſtance, would be ſolely confined to ſuch fields as were apparently of the richeſt quality; which would be eaſily diſcovered by the deepneſs of ſoil, and its aptitude to produce the greateſt quantity of graſs, or other plants with which the ſurface might be covered. The in-field would therefore, in every caſe, be compoſed of the beſt land which the reſpective diſtricts contained; and, as the whole manure raiſed upon the premiſes, was applied to the ſelect ſpots which came under this deſcription, it is not ſurpriſing, that, in the courſe of ſeveral centuries, their fertility ſhould have increaſed to a very great height.

Under the management mentioned, it is obvious that the great body of land continued in a waſte and unproductive ſtate, being only ploughed for a few years, or as long as it would carry crops of oats, and then left to recruit itſelf under natural graſſes and weeds. The firſt ſtep to improvement was, the aboliſhing of *out-field*, and thereby bringing the whole land of each farm under a regular courſe of huſbandry, agreeable to the quality of the reſpective ſoils, and the nature of the climate where the farm was ſituated. The greateſt improvements made in Scotland have been upon theſe ſecondary lands; which, in former times, without manure, fallow, and artificial graſſes, were only capable of paying a very trifling

trifling rent. Good land may produce rich crops under many impediments, of which the value of borough acres is a ſtriking proof; but, upon the obdurate exhauſted out-field, nothing to the purpoſe could be accompliſhed, without employing the moſt active exertions.

It is believed, that the above ſtatement will apply to the ſituation of Scotiſh huſbandry, till the concluſion of the 17th century; ſince which period, a great and thorough alteration has taken place.

The chief and primary means of accompliſhing this alteration, was the introduction of *Summer fallow*, which was not practiſed north of the Tweed ſooner than the time above mentioned. Without working the ground during the dry Summer months, it was impoſſible to clear the in-fields of the immenſe ſtock of annual and root weeds which had for ages been accumulated, or to reduce the coarſe ſterile out-field to a proper tilth for carrying good crops of corn or artificial graſſes. This valuable practice, which at all times is abſolutely neceſſary in the firſt ſtage of improvements, has generally been practiſed with as much effect as in any part of Britain: and, in no country whatſoever, is greater attention beſtowed upon the ſeveral proceſſes of ploughing, harrowing, rolling, and gathering graſs roots, than what is uſually beſtowed on the working of fallows in the Lowlands of Scotland.

The *Graſs Huſbandry*, which has been aſſiduouſly practiſed upon a great ſcale ſince the middle of the 18th century, was alſo of material advantage in the improvement of Scotiſh huſbandry; and, for thirty years back, a greater quantity of ſeeds have been ſown in the Lowland diſtricts, than in any part of England of the ſame extent. The uſual practice has been, to manage graſs lands according to the Norfolk faſhion, which is found to be more beneficial than withholding the plough for a greater number of years, as is cuſtomary in all the midland and weſtern Engliſh counties. The great advantage of artificial graſſes, by enriching and refreſhing the ſoil, are well known; and they are ſeldom ſown in this country, except with the firſt crop after Summer fallow, or upon land which has undergone ſuitable preparation.

Turnips were cultivated in Scotland very ſhortly after their introduction into Britain; and Mr Cockburn of Ormiſton, and other members of the *Society of Improvers*, raiſed them agreeably to the moſt approved rules. This valuable root, which is juſtly conſidered as deſerving a marked attention from every farmer upon a light ſoil, has recently ſpread with rapidity over all Scotland, and is cultivated in a way ſuperior to what is common among our ſouthern neighbours. Mr Tull's ſyſtem is uniformly adopted; which, for cleaning the ground, raiſing a weighty crop, and leſſening the expence of labour, is undoubtedly preferable to the broad-caſt, or hand method. The culture of this root is increaſing every year; and it is now ſucceſsfully practiſed upon many ſoils formerly conſidered as unfit for growing turnips. By employing a little attention, and ſowing fields of different ſoils in the ſame ſeaſon, there is not a doubt but that this branch of huſbandry may ſtill be further extended, which will ſerve to reduce the quantity of land hitherto kept under an unproductive fallow. The increaſed demand for butcher-meat holds out every encouragement for this extenſion; and another great inducement is, that the value of ſtock neceſſarily depends upon procuring a ſufficient ſupply of green food for their ſupport at every ſeaſon of the year.

If turnips have produced important advantages upon the light, free ſoils, *Beans*, drilled and horſe-hoed, have been found equally beneficial upon thoſe of a different deſcription. This pulſe, which was but little ſown in Scotland till the year 1770, unleſs upon the rich clays, has, ſince that time, been ſucceſsfully cultivated upon all the heavy loams; and, in many farms, now conſtitutes a regular branch of rotation. With a few exceptions, beans are conſtantly drilled at intervals of 20 or 27 inches; the latter mode is moſt prevalent, which admits the ground to be ploughed with a horſe, in the moſt ſufficient manner. Very little hand-hoeing is given, nor is it required; as the kind of land moſt adapted for their growth, and upon which they are commonly ſown, is not naturally diſpoſed to the growth of annual weeds; and fine crops of wheat generally follow, provided due attention has been paid to working the bean crop. The neceſſity

neceſſity of Summer fallow, which, under the preſent rate of rents, and value of labour, is an expenſive affair to the farmer, is conſequently much leſſened; for, if land is once thoroughly cleaned, and afterwards kept in a regular courſe of leguminous and culmiferous crops, alternately, it will remain in good order for a conſiderable number of years.

The *Potato*, which, during the 17th century, was conſidered as an article of garden growth, has, for fifty years back, been extenſively cultivated in the fields; and is now the chief crop employed, in the vicinity of great towns, for cleaning the ground. Though this root forms a principal part of the food of the lower ranks, and conſequently deſerves every mark of attention, yet the raiſing of it, in an agricultural point of view, cannot be conſidered as equally beneficial to the farmer with turnips and beans. It is only upon light ſoils that they can be cultivated with propriety; and, in ſuch ſituations, the land is better cleaned by turnips, which are ſown at a later period of the ſeaſon. In fact, this eſculent root can never enter into a regular rotation, as the demand is limited; but every farmer cultivates leſs or more, for the uſe of his family and ſervants.

Incloſing and *Draining* of land have alſo been of much advantage in facilitating improvements; and the advantages of both are evident to the moſt ſuperficial obſerver. If a farm is not incloſed, the farmer can hardly be conſidered, in many caſes, as being maſter of his poſſeſſion; and, without the operation of draining, the full advantages of good ploughing and manuring cannot be attained.

In the progreſs of theſe important improvements, much aſſiſtance has been gained from the liberal ſyſtem of connexion which has long ſubſiſted betwixt the great majority of landed proprietors and the tenantry; which has contributed not only to promote the ſolid improvement of the country, but has alſo been attended with beneficial effects to thoſe immediately intereſted. Long leaſes, free from arbitrary reſtrictive covenants, have formed a prominent feature in this liberal ſyſtem; without which encouragement, notwithſtanding of every other advantage, the huſbandry of Scotland would not,

at this day, deſerve to be diſtinguiſhed as eminently improved.

The elucidation of theſe ſubjects will occupy the future numbers of the Rural Inquirer; and any hints or information, from perſons verſant in the practical huſbandry of Scotland, will be received with pleaſure.

R.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

Agreeable to my promiſe, I ſend you another Paper upon the Flax Huſbandry, which, I truſt, will be acceptable to your Readers. The climate and practice of Ireland being nearly allied to the climate and practice of this country, it is hoped that this communication will be found of greater utility to the Growers of Flax, than the elaborate, and in many reſpects valuable Report of Mr Conſul DURNO, *reſpecting the Pruſſian, Ruſſian, and Poliſh Huſbandry, inſerted in your laſt.*

I am, &c.

N.

On the Culture, &c. of Flax, from the Practice of Ireland.

A GOOD crop of flax may be expected from any ſtrong clays which are fit for the growth of corn. Potatoes are generally the crop which precedes flax; but turnips, beans, or any manured crop, may be conſidered as good preparatives. It is eſſential that the ground ſhould be in fine tilth, and as free from weeds as poſſible. Light ſtubble lands, eſpecially ſuch as have been long in tillage, may, by proper preparation, bring a crop; but are not proper for the culture of flax, as the crop ſeldom comes to maturity. The ſtalks, before they are fit for pulling, turn to a reddiſh colour, called *firing* in the north

north of Ireland; which diſorder not only leſſens the quantity, but injures the quality of the flax, in every proceſs of the manufacture.

In this caſe, they are generally obliged to pull the flax at the firſt appearance of the blight. If this is neglected till a blotch is ſeen on the ſtalk, the crop is ſcarcely worth manufacturing, as no art in bleaching can bring the cloth made of it to a proper colour.

N. B.—No chalk in Ireland, and very little ſandy ſoil. Such lands would probably be liable to this imperfection.

About two buſhels of ſeed to the Engliſh acre is a proper quantity, except for the purpoſe of a very fine manufacture. For this purpoſe, the flax is to be pulled in a very green ſtate; and four buſhels to the Engliſh acre are in that caſe neceſſary. A ſure method of trying the quality of the ſeed, is, by ſowing ſome in a hot-bed. The moſt approved ſeaſon for ſowing, is the firſt fine weather after the middle of March.

The beſt mode of tillage is in beds about ſix feet broad, covering the ſeed about an inch and half deep, with what earth may be ſhovelled out of the furrows.

Theſe furrows are uſeful in carrying off under-water, and in giving air to the crop during the growth. But the tops of the ridges ſhould not be laid round, as that would carry off the Summer rains too quickly. Before the flax is five inches high, it ſhould be carefully hand-weeded; and, if any part lodges, it ſhould be turned over, as is often neceſſary with reſpect to barley. And, in general, during the growth of the crop, as much care as poſſible ſhould be taken, to preſerve the plants in an even ſtate of growth, which will be found of great advantage to the manufacturer in every future proceſs.

The produce may be eſtimated, on an average, at about ſeven pounds Sterling the Engliſh acre.

The crop ſhould ſtand till the lower part of the ſtalk gets a yellowiſh caſt, and the under leaves begin to wither, except when the flax is deſigned for an extraordinary fine manufacture, or a blight or firing has made its appearance on any part of the crop; in which caſe, it will be better to pull it in a green ſtate.

It will be worth attending to, in the pulling, to take all the ripeſt and ſtrongeſt grown flax firſt; and, leaving it in ſmall handfuls acroſs each other, but with the ends containing the ſeed towards the ſouth, to proceed to pull that of an inferior growth. By this means, the crop receives a ſorting, in the firſt inſtance, which will be conducive to the perfection of the manufacture in every future part of the proceſs. The weeds muſt alſo be carefully taken out of the handfuls, and the dirt ſhaken from the roots.

Immediately after pulling, the flax may be ſteeped, (unleſs the ſeed is to be preſerved; in which caſe, it is to be rippled, or dragged through a ſort of iron comb, to take off the ſeed pods); and the quality of the water is ſo far eſſential to the perfection of the manufacture, as to deſerve particular attention.

Turf bog water, which is not muddy, is found to anſwer very well for this purpoſe; but foul ſtagnate water gives a ſtain to the flax which can never be bleached out. Too pure a ſpring, or ſharp running water, limeſtone waters, or thoſe impregnated with a mineral acid (which is eaſily known, by their turning black with a mixture of galls), are equally injurious. The beſt water is that of a reſervoir dug in clay, or the ſides of which are lined with clay.

Such a reſervoir, 4 feet deep, which it ſhould not exceed, 6 broad, and 40 feet long, will contain the produce of an Engliſh acre. The water ſhould ſtand in this reſervoir about a fortnight before the flax is put in, which muſt be evenly ſtored, in ſheaves looſely tied, that the band may not prevent the effects of the water on that part.

The root ends ſhould ſtand higheſt, and the whole muſt be perfectly immerſed, and kept down by bundles of ſtraw, or hurdles, as all that is above water will be ſtained. The time it is to lye in the ſteep, depends on the ſoft quality of the water, and the ſtate of the weather. In good water, and warm weather, four days produce the effect, which, in other circumſtances, does not happen under twenty. But it is ſafeſt to examine the flax on the fourth day. After ſteeping, it ſhould be ſpread, even and thin, on fine graſs ground. For this purpoſe, *aftergraſs* is much recommended; but, if the graſs

graſs grows through the flax, it muſt be conſtantly turned over.

It is not eaſy to aſcertain the time the crop ſhould lye in this bleaching ſtate, which is intended to produce an even ſeparation of the rind from the caſe of the ſtalk. It is beſt to have it examined, from time to time, by the flax-dreſſer, who is moſt concerned that it ſhould come in a proper ſtate to the beetle or break. It is obſerved, however, that a good expoſure to the ſun renders leſs fire neceſſary to prepare the flax for a future proceſs: if it is not ſufficiently dried on the ground, which is ſeldom the caſe in Ireland, it is then put over hurdles, and dried with a gentle fire till it is fit for beetling, ſkutching, and the other operations of the flax-dreſſer.

In conſequence of the appointment of the Honourable Board of Truſtees, we, the Surveyors of Flax-raiſing employed by them, having met together, and maturely conſidered a paper, containing an abſtract of the rules practiſed in Ireland for the cultivation and dreſſing of flax, tranſmitted to the ſaid Board by the Lords of the Committee of Council for Trade, beg leave to offer our report and opinion thereon, as follows:

1ſt,—As to the Soil proper for Flax, and the Preparation for the Crop,

We conſider, and have found, from experience, that an open, black, loamy ſoil, enriched by having lain long in paſture, and broke up by proper tilth, is preferable to a clay ſoil, or any other we are acquainted with; and that either on the firſt or ſecond crop after paſture, which we have always found much better than after potatoes, turnips, or beans.

2dly,—With regard to the beſt Mode of proving the Goodneſs of Seed,

We agree with the writer of the paper, that the beſt method of trying the quality of ſeed, is by ſowing ſome in a hot-bed. But it ſhould be obſerved, that this is by no means a criterion that can be depended on, and therefore

ſore it ought to be recommended with caution. For we find, that even bad ſeed, if not altogether damnified, will vegetate, and make a promiſing appearance in a hot-bed.

3dly,—Method of covering the Seed, and utility of laying the Land in ſix-feet Beds.

We are humbly of opinion, that the mode here recommended, may certainly be of great utility in wet boggy ground, for draining it and bringing it into tillage: But we cannot by any means approve of it for land on which flax is to be raiſed in general; becauſe, in Scotland, and, as far as we know, in England too, the lands are generally laid out in ridges, from 12 to 18 feet wide; which method is much leſs expenſive than the making of narrow ridges, and is better calculated for crops of every kind. It is alſo to be obſerved, that the frequency of drains, occaſioned by theſe narrow ridges, muſt deprive the land too much of its proper moiſture.

And as to the covering of the ſeed, we would recommend bruſh harrowing, followed by a complete rolling, in preference to the mode ſuggeſted in the paper, which we are afraid would be found much too expenſive.

4thly,—Any part of the Flax not under Water will be ſtained, &c.

We have ſome difficulty in agreeing to the rule here ſuggeſted, that the root-ends ſhould ſtand the higheſt; for this reaſon, that the crop end of the flax being compoſed of the ſmalleſt fibres, require more watering than the other ends; and it is well known, that as the water is warmeſt and ſofteſt near the ſurface, it operates the more forcibly. The general practice in Scotland is, to place the root ends undermoſt.

Laſtly,—The more Sun the Flax gets, the leſs Fire neceſſary before Beetling.

In preference to the method here ſuggeſted, of drying the flax on hurdles, or any other way of applying fire to it, in order to prepare it for ſkutching, we would recommend

mend drying in an oven heated with the refuſe of the flax, and ſo very moderately, that a perſon may eaſily ſtand in it. There the flax ſhould be allowed to lye juſt long enough to take off the acquired damp; and in this way, the damp is removed more equally and ſafely than by any other means; and the flax is hereby rendered more fit for every after operation.

The foregoing are the only remarks which we have to offer, concerning the rules ſuggeſted in the foreſaid paper. We conſider thoſe upon which we have not made any remarks to be unexceptionable, and that the publication thereof may be of utility to the raiſers and dreſſers of flax in Great Britain. At the ſame time, we think it our duty to ſay, that, as a complete ſyſtem of flax culture, we cannot look upon it to be altogether ſo ſatisfactory as it might be made.

All which is humbly ſubmitted by, &c.

[Signed by four Surveyors.]

FOR THE FARMER'S MAGAZINE.

Hints to Farmers.

I REMEMBER to have heard a little ſtory of the father of the preſent Envoy of Britain in America, that contains in it much of the crambo of our employment. Mr Liſton was a reſpectable farmer on the eſtate of Dundas in Weſt Lothian, and very ſucceſsful, by diligence in his operations. One day the Laird, walking penſively out of a morning, met and accoſted his worthy tenant thus: "Robert, I ſee every thing right and thriving about you. How comes it that you ſucceed ſo well, paying a good rent, when I, who am laird on my own farm, and pay no rent, find it even a loſing buſineſs?" "Why, Sir," ſaid Liſton (after ſome pauſe), "the difference between your honour and me is juſt this: When you go to bed at night, you ſay to your overſeer, tell them to do this or that to-morrow; but I am firſt up in the morning, and I ſay to my lads, Come, firs, and let us ſet on to purpoſe! I keep the key of my

my barn under my bolſter, and nothing is too ſmall for my attention."

This is the firſt leſſon to farmers, on which it is needleſs to enlarge.

I remember another ſtory relating to farming. When Cockburn of Ormiſton, Scott of Duninauld, and Lord Kames, had firſt ſet the proprietors in Scotland to think of ſcientific farming, and the learned Profeſſor Francis Home had enriched the art with authentic principles in the philoſophy of vegetation, a Scots laird, full of theory, but deficient in practice, was bragging to one of his principal farmers of his knowledge, and laying down with emphaſis the chimerical analyſis of ſoils and manures, and had at laſt come to the end of his harangue, with a—"Well, Sandy, what think you of this? how do you manage your farm?" "Why, really, Sir, and pleaſe your honour," ſaid Sandy, "I am as ignorant as the child unborn of all that you have ſaid. My only ſcheme has been, to make my farm dry; to make and keep it clean; to muck it well with good and clean dung; ſow it at a right time with principal and *well liquored ſeed;* keep the vermin off my corn, and take it off the ground when it is perfectly ripe. Indeed, Sir, I have little more to ſay; your honour has incloſed all my land; I will never allow a gap in my fences, or a filthy weed to be ſeen in my land. I like a cann of good ſtrong ale or cappy; but I hate whiſky, and never loiter in public houſes. I am ſure your honour will not be angry at any thing I have ſaid, as I am never a week behind with your factor at term-time."

This is the ſecond leſſon to farmers. B.

(*To be continued.*)

(*The following Regiſters of the Weather, during the years* 1782 *and* 1799, *have been ſent us by an intelligent and reſpectable Farmer; and, as the conſequences attending theſe two fatal years have been nearly ſimilar, we judge, a comparative view of the cauſes which occaſioned them, will be intereſting to our Readers. The further favours of this Correſpondent will be highly acceptable.*)

FOR

FOR THE FARMER'S MAGAZINE.

Regiſter of the Weather in 1782, *taken monthly, by a Farmer in the Vicinity of Edinburgh, and written, without any intention, at the time, of being publiſhed.*

January.

Cold rainy weather, with very boiſterous winds from the S. W. Little ſnow.

February.

Either ſnow, cold rains, or boiſterous winds, the whole month. Little work done.

March.

Exceſſive froſt, much ſnow, or great rain, with cold E. winds from beginning to end. Labour far back.

April.

A very wet and cold month; wind conſtantly in the E. It was near the middle before the ſowing was generally begun.

May.

Began very cold, and continued ſo till the 15th, when it commenced an exceſſive rain; and although the air became milder, labour was put a ſtop to for eight days. The 23d was heavy rain, beyond any thing in remembrance. The *bear land*, of courſe greatly damaged. Wind always E.

June.

Attempts were again made, in the beginning of this month, to ſow the barley; but repeated floods rendered it impracticable till about the 16th. Our barley ſeed was finiſhed on the 18th. Some people in this neighbourhood continued to ſow till the 24th. Many fields were left for fallow. The 22d, 23d, 24th, and 25th days, were remarkably warm. The ſnow lay on the hills N. W. of Stirling till the 22d.

July.

Fine dry weather till the 27th; then mild ſhowers till the end. Wheat ſhot about the beginning of the month.

Roſes

Roſes blown on the 5th. Peas bloomed on the 15th. Barley and oats *ſhot* on the 20th.

Auguſt.

Very inconſtant weather, but generally cold and rainy. An exceeding high wind on the 25th, which, however, did little damage, the corns in general not being near ripe. Two or three days in the end were dry and warm. A ſmall field of wheat cut down on the 28th near Stockbridge. Very few peas full, but many in full bloom by the end of this month.

September.

Tolerable good weather the firſt three days, then thick fogs ſucceeded by cold E. winds until the 15th, when a heavy rain came on, which laſted three days. From thence cold dry weather, with high wind from the W., and rain alternately till the end. Began to ſhear on the 5th; left off from the 14th to the 23d; and again, on the 28th. For want of ripe corn, had no oats cut all this month. Many farmers, within two miles of Edinburgh, did not begin to ſhear till the 19th; and at five miles diſtance, did not ſhear at all during September.

October.

In general dry, but cold weather until the 19th, when, after moſt boiſterous wind, there were heavy rains, froſt, or ſnow, to the end. On the 30th, the ſnow lay two inches thick all over Mid-Lothian; a circumſtance, however alarming it might be to the country people, on account of the crop, at that time nearly all out in the fields, and much of it to cut down, was an occaſion of exultation to the newſmen, who had all along prognoſticated a crop; and who very ſapiently remarked, that, by means of the froſt and ſnow, the public might be aſſured of ripe corn, which otherwiſe, they now confeſſed, was very much to have been doubted.

November.

Very hard froſt till the 14th; from that to the end, freſh and froſt alternately. This was a very buſy harveſt month. Many farmers, even within two miles of Edinburgh, had a great deal to cut down. We were all

cut

cut down on the 6th, and *led in* on the 18th. Near a half of all the potatoes in the country were deſtroyed by froſt, and a great proportion of the oats rendered unfit either for meal or ſeed. Many heated ſtacks. The wheat ſeed, however, was got pretty well through in the courſe of this month, and in tolerable good order.

December.

Began with hard froſt, and was froſt and freſh by turns during the whole month. The wheat ſeed finiſhed by the end of the month in very good condition, there being no ſnow in the low part of the county.

Weather Regiſter on the ſame Farm during the Year 1799.

January.

In general, mild freſh weather, with ſome heavy winds from the weſt, only ſeven days rain in all, but ſome hard froſt in the end of the month. Labour carried on pretty well.

February.

The firſt eight days hard froſt throughout. On the night between the 8th and 9th, a ſtorm of ſnow came on from the S. E., which laſted with unremitting violence for twelve hours. It was utterly impoſſible to do any work in the fields, hardly practicable even within doors, as the ſnow drifted through every thing. Many ſheep ſmothered in the ſnow. From this to the 16th, freſh and froſt alternately; and from thence to the end, in general mild freſh weather, and the ploughing going on briſkly.

March.

The firſt twenty days in general mild freſh weather, and a great deal of work done, particularly in the *oats ſeed*, which was nearly finiſhed during this period. From the 20th to the 28th, exceeding cold damp weather. The laſt three days heavy ſnow and hard froſt.

April.

April.

Began with froſt, and continued almoſt inſufferably cold to the 15th; on the 8th, there was a great fall of ſnow. From the 15th to the end, fair and foul by turns, but on the whole cold, labour far back, no vegetation.

May.

1ſt, A continued rain. 4th, Thick ice. 6th, Began to plant potatoes three weeks behind the uſual time. 7th, and 8th, continued rain. 9th, fair. 10th, 11th, 12th, and 13th, uncommon heavy rain. *Bear land* and potato ground greatly damaged, the water in all the rivulets overflowing, a great *ſpeat*. 18th, *Spring* appears now to be begun; from this to the end, in general fair but cold weather, few trees have yet the leaf out. Saw a ſwallow for the firſt time, on the 10th, being about two weeks later than uſual. Heard the cuckoo for the firſt time on the 28th.

June.

1ſt, Very cold wind. Old ſnow ſtill on the muirfoot hills. 4th, An exceeding rainy day. From this to the 9th, warm weather. 10th, Very cold; people again drawing to their great coats. The hay lands looking miſerable; yet wheat and other grain not amiſs, paſture very good. 15th, The whole gardens have ſtill the *flouriſh* in full ſplendour, eight weeks behind the uſual time. Snow on the hills N. W. of Stirling; from the 15th to the end, in general warm, with ſeveral refreſhing ſhowers. People ſowing barley to the 15th; wheat in early places beginning to ſhoot by the 26th. The potatoes have failed in many fields, and of courſe given up to Summerfallow or turnip; alſo many intended fields of *bear land*.

July.

In general, fine warm growing weather, with the exception of the 4th, 12th, 18th, 19th, 23d, and 24th, in which there was much rain, attended with great cold. Delivered *new* hay on the 11th, perhaps the firſt in the county. The crop appears, in the end of this month, to be much more forward than was expected, and alſo ſeemingly better, hay only excepted, which is very thin indeed, never having recovered the cold in April and May.

Auguſt

Auguſt.

A ſad month this for the huſbandman; there being not leſs than ſixteen days of heavy rain, of which, that on the 17th, 18th, and 31ſt days, was almoſt beyond example exceſſive. The 23d was in an equal degree deſtructive, from the wind being tremendouſly high from the weſt, doing damage to every crop, particularly to the potatoes, which never recovered the ſhock. Very little appearance of harveſt, and the crops greatly laid, and out of order, having been in a conſiderable degree luxuriant previous to this. Turnip land (unleſs in very dry ſoils) all gone wrong, as well as the fallows. Great accounts, however, of the crop in the newſpapers, and, as uſual, a bountiful prognoſtication of plenty!

September.

In general, pretty fair weather till the 12th; when it began to rain, and laſted, with little intermiſſion, ten days. Sunday the 22d was an exceeding cold ſtormy day; but, from this to the end, remarkable fine harveſt weather. All the neighbourhood of Edinburgh were ſhearing on the 23d, but very few before that; and a great deal of work was done. Shearers, although dearer than uſual, were to be had in abundance. No ſhearing, however, in the muirlands all this month. It was univerſally remarked, that, however bulky the crop appeared, it was cut down with comparatively little trouble; the ſtraw, being ſoft, gave little reſiſtance to the hooks; and, in fact, was bound up into leſs bulk than its appearance indicated. The ſecond crop of clover having very generally failed, many farmers were under the neceſſity of eating up, with their farm-horſes, that ſtock of hay which would have otherwiſe gone to market; and ſeveral fields of peas went alſo to the ſame uſe; which was, in fact, only conſuming fodder, as there was very little grain on that deſcription of crop.

October.

1ſt, An uncommon fine day; 2d, fair till noon, then rain; 3d a ſtormy cold day, few of the ſhearers could keep the field; 4th, exceeding bitter cold blaſts; 5th, a fine work day; 6th and 7th, rain throughout; 8th, 9th,

and 10th, fair; 11th, rain; 12th to 17th inclusive, fair; 18th, hard froſt; 19th, freſh wind; from this to the end, good harveſt weather, with the exception of froſty mornings. Very little wheat yet ſown; the greateſt part of the country being ſtill in the throng of harveſt. Corn turning very ill out in the barn-floor, and at the mill; wheat worſt of all.

November.

In general fair, with froſty mornings, till the 20th; then raw damp weather, till the end; and the 30th, a day of rain throughout. Though this has been a very buſy harveſt month, yet it is not concluded; particularly in the muirlands, where they have ſtill to *reap*, as well as to *lead in*. Very little wheat yet ſown, and none in good condition. The prices are getting up faſt, in proportion as it is more and more known that the crop is deficient. Even the newſmen are almoſt convinced that the crop is not *ſo very immenſe* as they predicted; but, in compenſation for the error they have done every thing in their power to lead the public into on this ſubject, they are, from day to day, iſſuing out many ſage advices to the farmers, how to manage their ſtacks of corn, how to ſave, and how to ſow: all which will no doubt meet with the deſerved attention.

December.

Dull heavy weather (though not much rain) till the 17th; when froſt and ſnow ſet in, and continued with conſiderable ſeverity till the end. Many fields of muirland corn ſtill *unled*. Even within 3 miles of Edinburgh ſome barley uncut; but this not to any great extent. Very little wheat ſown this month.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Sheep and Great Farms favourable to Population.

GENTLEMEN,

AFTER having heard ſo much clamour raiſed againſt the ſubſtituting of ſheep for black cattle in the Highlands, and againſt great farms in general, as having an effect

effect to depopulate the country; it is not a little curious, that the direct contrary is the truth, as now completely aſcertained from the recent numeration of the people by Sir John Sinclair, in the Statiſtical Account of Scotland, compared with a ſimilar muſter by Dr Webſter in 1755.

Thus, in the extenſive Highland counties of *Argyle*, *Inverneſs*, and *Roſs*, (the diſtricts, of all others, wherein ſheep have been more extenſively introduced, the farms more enlarged, and from whence, on theſe accounts, the greateſt clamour has been raiſed), the population in 1755 was 170,440; yet, in ſpite of the alleged depopulation, from ſheep and great farms, the number of people, in 1792-8, is 200,226; being an increaſe, in the ſhort period of about forty years, of 29,786, from a territory poſſeſſing almoſt neither towns nor manufactures, hardly even agriculture, ſtrictly ſpeaking; the whole being, in general, a paſtoral country, applied almoſt excluſively to the rearing and feeding of ſtock.

In like manner, the counties in the ſouth of Scotland, *Berwick*, *Roxburgh*, *Dumfries*, *Kirkcudbright*, and *Wigton*, where flocks of ſheep have increaſed much, as well as the ſize of farms, the population has alſo been augmented conſiderably. Thus, in 1755, the number of people was 135,183; it is now 163,166. I do not here ſtate the vaſt increaſe of population that has, in the ſame period, taken place in the counties of *Ayr*, *Renfrew*, and *Lanark*; as in theſe it has, in a conſiderable meaſure, been owing to the increaſe of towns and manufactures, neither of which have had much effect in the counties firſt mentioned.

But this is not all. *Population is on the* DECREASE, *where the farms are ſtill ſmall, and the number of ſheep inconſiderable!* Thus, in the three contiguous counties of *Aberdeen*, *Banff*, and *Elgin*, ſtill remarkable for ſmall tenantry and diminutive flocks, the population in 1755 (excluſive of the city of Aberdeen) was 172,225; it is now only 163,261! Can any ſtronger evidence be required?

One would have thought the bare fact, that Scotland has increaſed in population, in the courſe of forty years, from 1,265,380 to 1,527,892, would have convinced

every impartial perſon, that the enlargement of farms, and the increaſed number of ſheep, (which has only been remarked during the ſame period), have had no tendency to depopulate the country; a fact, of which every impartial perſon is convinced: But this, nevertheleſs, has not prevented the prejudiced or the ignorant from raiſing a great outcry againſt ſheep and great farms; and, once prepoſſeſſed on the ſubject, it is poſſible they will continue to ſhut their eyes on every evidence offered to undeceive them.

How it came to be ſuppoſed, that ſheep, which demand an unremitting attention, ſhould yet require fewer people to manage them in the Highlands than black cattle, which roam at large on the hills, for ſeveral months together, uncared for, or at leaſt unattended to, is not to be accounted for. The fact, however, that the country has increaſed in population, in proportion as the ſheep have increaſed in number, (affording more employment, as well as more food), appears to be completely aſcertained. The ſame beneficial conſequences appear alſo to have enſued from enlarging the farms, (to the limited extent in practice in this country); for although the number of actual farmers has thereby been diminiſhed, yet more people have been employed in the works of huſbandry, from the more improving ſyſtem of operations which takes place, (which alſo ſends more food to market); while, at the ſame time, the labourers themſelves are, in a greater proportion, *married* people; as the man who farms on a large ſcale always finds it his *intereſt* to employ ſuch, in preference to young men or boys, the uſual population on little farms.

February 20*th* 1800. H.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Premiums offered by the Board of Agriculture, for 1800.

No. I.

To the perſon who ſhall draw up, and produce to the Board, the beſt, ſimpleſt, and moſt practicable plan, for

for ameliorating the condition of the labouring poor of this kingdom, by alterations in the poor laws, of eaſy execution, and without materially increaſing poor-rates ——*the Gold Medal.*

To be produced to the Board on or before the firſt Tueſday in March 1801.

No. II.

To the perſon who ſhall build on his eſtate the moſt cottages for labouring families, and aſſign to each a proper portion of land, for the ſupport of not leſs than a cow, a hog, and a ſufficient garden——*the Gold Medal.*

Accounts of the expences of building—land aſſigned—culture, if any—live ſtock, and ſtate of the families, with the rent paid—verified by certificates, to be produced to the Board on or before the third Tueſday in April 1802.

No. III.

Doubts having been expreſſed by ſome perſons concerning the expediency of cottagers keeping cows, except on rich ſoils, the Board will give to the perſon who ſhall produce the moſt ſatisfactory account, verified by experiments, of the beſt means of ſupporting cows on poor land, in a method applicable to cottagers——*the Gold Medal.*

Accounts to be produced of the ſoil—articles cultivated—produce—ſtock kept—and every material circumſtance—verified by certificates, on or before the firſt Tueſday in May 1801.

No. IV.

To the perſon who ſhall make the moſt ſatisfactory experiments tending to the improvement of the culture of each of the following plants, reſpectively, viz. wheat, rye, barley, oats, peas, beans, tares, buck-wheat, turnips, cabbages, roota-baga, potatoes, carrots, parſnips, clover, lucerne, ſainfoin, chicory, hemp, flax, hops—*the Silver Medal.*

Accounts, verified by certificates, to be produced on or before the ſecond Tueſday in May 1802.

The ſame Premium for 1803.

No. V.

To the perſon who ſhall draw up, and lay before the Board, the beſt memoir on the means of obviating the objections which have been made to a general incloſure act, in ſuch manner as to facilitate ſuch a meaſure, whenever it may be had recourſe to——*the Gold Medal.*

To be produced on or before the third Tueſday of January 1801.

No. VI.

To the perſon who ſhall draw up, and produce to the Board, the moſt ſatisfactory memoir on the beſt means of preventing future ſcarcities——*the Gold Medal.*

To be produced on or before the ſecond Tueſday in March 1801.

No. VII.

To the perſon who ſhall build and deſcribe to the Board, the cheapeſt cottage, being at the ſame time durable and comfortable——*the Gold Medal.*

A plan, elevation, and account of the materials and expence, verified by certificates, to be produced on or before the firſt Tueſday in May 1801.

No. VIII.

To the perſon who ſhall invent and execute, in a manner applicable to a common uſe, the beſt and cheapeſt ſubſtitute for leather, in the ſhoes of the labouring poor, being an improvement on any that may at preſent be in uſe——*the Gold Medal.*

A pair of ſhoes, with an account of the materials and expence, to be produced on or before the firſt Tueſday in December 1800.

No. IX.

To the perſon who ſhall, through the entire Summer of 1800, keep the greateſt number of cattle in ſtalls, houſes, or confined yards, and fed entirely in the ſoiling method, with green food——*the Gold Medal.*

Certificates of the number of cattle, and acres of food, and ſorts eaten—the quantity of dung made, with other circumſtances of the experiment—to be produced on or before the firſt Tueſday in December 1800.

The ſame Premium for 1801.

No.

No. X.

To the perſon who ſhall improve, and bring to the annual value of not leſs than 10s. an acre, the greateſt number of acres heretofore waſte, not leſs than 50—*the Gold Medal.*

Accounts of the improvement, verified by certificates, including the ſtate of the land before the experiment, and of the cultivation, expences, and produce, to be laid before the Board on or before the firſt Tueſday in March 1803.

Notice of the intended improvement to be ſent to the Board.

No. XI.

To the perſon who ſhall lay before the Board the moſt ſatisfactory account of Mr Elkington's drainings—*the Silver Medal.*

The ſoil and ſtate of the land before draining, the method and expence of the improvement, with a plan, and the reſult of the operation, to be produced on or before the ſecond Tueſday in December 1800.

No. XII.

To the perſon who ſhall, by a ſeries of the moſt ſatisfactory experiments, aſcertain the comparative advantages and diſadvantages of folding ſheep——*the Gold Medal.*

Accounts, verified by certificates, to be produced on or before the firſt Tueſday in April 1803.

No. XIII.

To the perſon who ſhall, in a country where irrigation is not generally in practice, water the greateſt number of acres, and in the completeſt manner——*the Gold Medal.*

Accounts of the old and new ſtate of the land and value, the method, expence, and produce, verified by certificates, to be laid before the Board on or before the third Tueſday in January 1802.

No. XIV.

To the perſon who ſhall make, and report to the Board, the moſt ſatisfactory experiments on the compariſon of horſes and oxen, in the general buſineſs of a farm—*the Gold Medal.*

The account, verified by certificates, to be produced on or before the laſt Tueſday in April 1803.

No. XV.

To the perſon who ſhall, from authentic documents, and actual enumeration, report to the Board the moſt ſatisfactory account of the houſes, and the preſent and paſt population, of any hundred, diſtrict, wapentake, or diviſion of country in Great Britain, containing not leſs than ten contiguous pariſhes——*the Silver Medal.*

To be produced on or before the laſt Tueſday in April 1801.

No. XVI.

To the perſon who ſhall give the moſt ſatisfactory account, verified by experiments, of the effect of ploughing in green crops for manure——*the Gold Medal.*

Accounts, with certificates, to be produced on or before the firſt Tueſday in March 1802.

No. XVII.

Potatoes and wheat, in conſtant ſucceſſion, being the courſe of crops which affords the moſt abundant food for man, the Board will give to the perſon who ſhall make and report the moſt ſatisfactory experiments, on not leſs than five acres cultivated in that courſe during four years——*the Gold Medal.*

Accounts of the ſoil, culture, produce, application, or price, verified by certificates, to be produced on or before the firſt Tueſday in May 1804.

The ſame Premium will be given (but not to the ſame perſon) for the ſame account of ſix years.

Accounts to be produced in May 1806.

No. XVIII.

To the perſon who ſhall lay before the Board the moſt ſatisfactory account, verified by chemical experiments, or other ſufficient authorities, of the nature of manures, and the principles of vegetation——*the Gold Medal.*

To be produced on or before the firſt Tueſday in December 1800.

No.

No. XIX.

To the perſon who ſhall lay before the Board, the moſt ſatisfactory account of the application and effect of manures, verified by practical experiments, on not leſs than one acre for each ſort of manure——*the Gold Medal.*

To be produced on or before the firſt Tueſday in December 1802.

No. XX.

To the perſon who ſhall lay before the Board, the moſt ſatisfactory paper on the means of aſcertaining the probable ſtate of the weather, ſo as to furniſh uſeful information to the huſbandman——*the Silver Medal.*

To be produced on or before the third Tueſday in May 1801.

No. XXI.

To the perſon who ſhall give the beſt account, with drawings, of the various inſtruments of huſbandry——*the Gold Medal.*

To be produced on or before the firſt Tueſday in April 1801.

GENERAL CONDITIONS.

1. The Board reſerves to itſelf the power of withholding any premium, when the communication or communications are not deemed ſufficiently important to merit the reward.

2. The MS. &c. ſent in claim of Premiums, to remain the property of the Board.

3. All memoirs, &c. ſent in claim of Premiums, to be without names; with a mark or number; and accompanied with a ſealed letter, on which is written the ſame mark or number, and containing the name and addreſs of the claimant; not to be opened unleſs the Premium is adjudged to that mark or number.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Query concerning the Quality of Straw.

GENTLEMEN,

WHETHER is the ſtraw of a thoroughly ripe crop, or one win in the juice, the beſt fodder for beaſts? Some affirm, that the weather productive of full corn, muſt be productive of feeding ſtraw; while others, reaſoning from the ſimilarity to hay, argue for ſtraw made in the ſap.

The 1798 and 1799 brought forth ſtraw of theſe oppoſite deſcriptions, and ſhould, by the contraſt in their nutritive effects, concluſively decide the point, if farmers have accurately compared the different condition of beaſts fed upon ſtraw for theſe years. Yours, &c.

H.

Remark by the Conductors.

The above query appears very fairly put, and we apprehend, there can be but one opinion reſpecting the anſwer, viz. That the ſtraw win in the juice muſt be the beſt fodder. We cannot, however, conſider the quality of the ſtraw produced in 1798 and 1799, as competent evidence to determine the point; as both ripe and green ſtraw, of the latter, were eſſentially different from that of the former year. The ſtraw of 1799 never poſſeſſed equal ſubſtance with that of 1798, becauſe it had not the benefit of ſo much ſunſhine, and, from the ſeverity and wetneſs of the weather, was deprived of the greateſt part of its juices long before it was ripened.

N.

FOR THE FARMER'S MAGAZINE.

Letters from a Scots Farmer, during a Tour through England, to his Friend in Edinburgh.

LETTER II.

AFTER enjoying a good night's reſt at York, we ſet off at five o'clock, in a fine June morning, for *Tadcaſter*. We paſſed through a delightful country, incloſed on every hand. The ſun ſhone bright; the air was mild and ſerene; and every circumſtance contributed to render the time employed in travelling this ſhort ſtage exceedingly agreeable.

Tadcaſter is not a large place, nor does it contain any manufactures; but the ſoil of the adjoining country is moſtly of excellent quality, which is in general kept under good cultivation. We only halted here for a few minutes, and then proceeded to Ferrybridge, where we breakfaſted.

Betwixt theſe two places, lies the eſtate of a worthy nobleman, who juſtly conſiders the ſcience of Agriculture as meriting equal legiſlative attention with trade and manufactures, and who wiſely devotes a conſiderable part of his valuable time to the management of rural affairs. We ſaw ſeveral of his improvements, which were conducted according to the ſtricteſt rules of art, and received accurate accounts concerning thoſe which did not come under our obſervation. Inſtead of trifling away his time in the cultivation of a few acres, he carries on his operations upon the great ſcale, and intends, at a future period, to arrange his eſtate in the ſhape of regular-ſized farms, which was not the caſe when he entered to poſſeſſion. Happy would it be for Britain, were all the great proprietors of land diſpoſed to view the cultivation of the ſoil in a ſimilar manner with this noble perſonage! Agriculture would then advance with haſty ſteps to perfection, and the capital ſtock of the country would be improved to its greateſt height.

Ferry-Bridge, being one of the great ſtages upon the north road, is chiefly occupied by innkeepers. At this place, we received information concerning the *River-Aire-Navigation*, which is the moſt profitable undertaking of the kind in England. This navigation was originally planned and executed in the reign of Charles I., and

and has ſince been gradually extended, by the aid of canals, ſo as to admit of communication with almoſt every part of the kingdom. Yorkſhire poſſeſſes the full advantage of water carriage. Indeed, without it, the valuable manufacture of the Weſt Riding could hardly be carried on. It gave us pleaſure to learn, that the adventurers were, upon the whole, handſomely repaid.

The ſoil hereabouts is all incumbent on limeſtone, and large quarries of this valuable mineral are wrought in the neighbourhood of Ferry-Bridge, which, after undergoing the proceſs of calcination, is tranſmitted, by water carriage, over the whole of this large and valuable diſtrict. The huſbandry of the county, reſpecting its application, appears, however, very imperfect; and I am inclined to think, that much of it is uſed, not from a conviction that it will produce beneficial conſequences, but merely becauſe the tenants are taken bound to lay on a certain quantity each time their land is fallowed. As two crops, or at moſt three, are only allowed to be taken after one fallow, and as the arable lands are generally kept conſtantly under the plough, it neceſſarily happens, that lime is often applied when the ground is exhauſted, or when it is in an improper condition for receiving benefit from calcareous manures. The money, therefore, expended in the purchaſe of this article, muſt, in many caſes, be conſidered as miſapplied, which would not likely happen, were it left to the judgment of the poſſeſſors, how often, and to what extent, the ſoil required the application of ſuch a ſtimulus.

It will be generally acknowledged, that the moſt beneficial mode of liming land, is, to give a ſufficient doſe at once, when the ſoil has been enriched by a quantity of dung, or has been recently refreſhed, by remaining ſeveral years in graſs, which precludes the neceſſity of a repetition for a conſiderable number of years. The old graſs lands of Yorkſhire would therefore be a fine ſubject for the operation of this article, which is juſtly regarded as the baſis of good huſbandry; while the lands preſently in aration would be equally benefited by throwing them into graſs. It is evident, however, that theſe things cannot take place, till the nature of the connexion betwixt landlord and tenant is materially altered; for, under the preſent ſyſtem, it is highly improbable that any ſuch improvements will be practiſed.

The

The errors of the Yorkſhire *lime huſbandry*, may juſtly be attributed to the reſtrictive covenants impoſed by the proprietors, and not to any fault of the tenantry, who are ſeldom allowed the exerciſe of their own judgement in ſuch matters. It is impoſſible that theſe covenants can be regulated with ſuch propriety as to meet every caſe; therefore, it may ſafely be admitted, that when the tenant is taken bound to fallow every third or fourth year, and to dreſs that fallow each time with a certain quantity of lime, that the fallow is often repeated, when the condition of the ground does not require it; and that lime is often beſtowed, when circumſtances prevent it from proving in the leaſt degree beneficial. The proprietors ſeem to conſider the tenant as very ignorant of practical knowledge, otherwiſe they would not hedge up their management with numerous rules, moſtly inapplicable to the preſent ſtate of Britiſh huſbandry, and conſequently deſerving to be proſcribed as obſolete, and improper to be executed. I have heard many excuſes for ſuch inſtances of arbitrary interference; but few are of a nature calculated to produce conviction. If a farmer does not know when his land is to be benefited by the application of lime, he is not fit for the poſt he occupies.

Pontefract, which lies a few miles weſtward of the great road, is ſurrounded by fine fields of deep loam, wherein liquorice and nurſery articles are raiſed to a conſiderable extent. A large corn market is held here, which is attended by a number of reſpectable farmers, and the grain preſented for ſale was generally of excellent quality.

This part of Yorkſhire makes a reſpectable figure in huſbandry; and very few of the fields appeared to be unproductive, unleſs it be thoſe called common, or not held in ſeveralty; of which more afterwards. Not much plain fallow is to be ſeen, and turnips are cultivated upon the great ſcale. The broad-caſt method is uſually adopted, which I muſt conſider as much inferior to the northern cuſtom of raiſing them in drills, both in reſpect of expence, and in the degree of cleaning given to the ground, which are points of the utmoſt importance.

Doncaſter was our next ſtage, which is a ſtirring buſtling place, and has large common fields in its vicinity. Some of theſe fields contain as fine ſoil as ever I examined; but

but their tenure and cultivation neceſſarily preclude a rent from being paid proportional to the intrinſic quality. Common fields have but lately come under my inſpection, and to a Scotſman they certainly muſt be a matter of wonder and regret.

Sheffield, the ſtaple place for cutlery articles, is ſituated above eighteen miles weſtward from Doncaſter. And here a circumſtance occurred, which ſtrongly marks the character of Engliſh tradeſmen. Wiſhing to ſee a few of its valuable manufactures, we had procured a recommendatory letter to a merchant in the place, who, we were told, was well acquainted with ſuch matters; and having delivered it upon our arrival, he accoſted us with—'Pray, gentlemen, where do you come from?' We replied, 'From Scotland.' 'Sorry for it,' ſays he, 'for I can neither ſhew the manufactures to a Scotſman nor a Frenchman. You are come to carry off our inventions, I ſuppoſe.' It was to no purpoſe we aſſured him that we were country farmers upon a tour, to ſee the huſbandry of the kingdom, and that we only wiſhed to gratify a little harmleſs curioſity. 'It won't do, gentlemen. You are Scotſmen! ſorry for it: can't ſhew you the manufactures. Good b'ye, gentlemen.'

From Doncaſter to Newark-upon-Trent, the road is like a bowling-green for levelneſs; and no forty miles in England are travelled with greater facility. At Bautry we quitted Yorkſhire, which, for magnitude, general value of territorial property, and extenſive manufactures, undoubtedly ſurpaſſes every county in Britain.

Nottinghamſhire was the next diſtrict through which we paſſed, and contains a great deal of what is called *foreſt ſoil*, very different indeed from what has lately come under our obſervation. The country upon the great road is more open, the fields more extenſive, though, upon the whole, well cultivated, while wind-machines for grinding grain were working on all ſides, which was a ſure proof that circumſtances were altered. A different ſyſtem of huſbandry ſeemed neceſſary than what was required in Yorkſhire, and ſuch was accordingly practiſed.

The huſbandry of the upper part of *Lincolnſhire* contained more diſagreeable features than any we have hitherto examined; and the condition of an extenſive common field near Grantham, was ſufficient to provoke the moſt patient

patient agriculturiſt in the three kingdoms. To have ſuch fine land lying in ridges and baulks alternately, the one half unproductive, and the other half waſte, was ſuch an inſtance of high treaſon againſt the good of the community, that the poſſeſſors deſerve to be indicted as publick nuiſances to the State. To ſee what may be called the capital ſtock of the country, ſo groſsly miſmanaged, while the inhabitants are ſtarving for want of proviſions, ſurely calls aloud for legiſlative interference, without which no effectual remedy can be provided.

But ought the blame to be ſolely placed to the account of the poſſeſſors? or rather, Is not the ſupreme authority of the country cenſurable for not uſing the means of rooting out the cauſes which neceſſarily produce ſuch abject and deplorable economy? Individuals may wiſh to reform the radical defects which prevail in the legal polity of the country, reſpecting the tenures or conditions upon which property is held and poſſeſſed, but very often the means are out of their power. A deciſive act of the Legiſlature is neceſſary for correcting thoſe evils, which muſt be founded upon liberal and public-ſpirited principles. If the intereſt of individuals ſhould, in ſome inſtances, be ſacrificed in conſequence of ſuch a ſtrong meaſure, this affords no weightier objection than what may be urged againſt almoſt every road or canal-bill, or other bills for promoting improvement.

If an act of Parliament was paſſed for limiting the growth of grain in England, it could not be more injurious to the public good, than what is ſuſtained in conſequence of ſuch immenſe and valuble tracts of ground being left in a common-field ſtate. It muſt be remarked, that they are uſually of the beſt kind of ſoil where they are ſituated. And the reaſon is obvious; they were firſt cultivated, and people would undoubtedly take poſſeſſion of the moſt fertile ſpots, before they attempted to meliorate and improve thoſe of a more ſterile and obdurate nature. I was told, that ſome of theſe fields had been cultivated in a ſimilar way for five or ſix hundred years, probably for a longer period; and that no deviation could be introduced into the cuſtomary courſes of cropping, eſtabliſhed in the different townſhips, without the expreſs conſent of every perſon concerned, unleſs an act of Parliament is paſſed for dividing, incloſing,

and

and holding them in ſeveralty. Such fields are therefore kept under a perpetual round of crops, except that broad clover may, for a ſingle ſeaſon, be partially admitted. You may therefore judge what kind of crops are uſually produced under ſuch management.

Many Scotsmen are ignorant what a *common-field* is. When you mention ſuch a ſubject, they imagine it is a piece of barren, whinny land, depaſtured with the cows of the neighbourhood, without reflecting that the term applies to the beſt lands in England. This tenure bears ſome affinity to our old run-rig faſhion in Scotland; only that, ſince 1695, it was in the power of any ſingle proprietor, to force a diviſion of the premiſes, by applying to the Sheriff of the county, upon whom the execution of the law for dividing commonties, was devolved. It is owing to the want of a ſimilar law in England, that ſuch grievances exiſt; for it is evident, that the preſent mode of diviſion is ſo vexatious and expenſive, that one half of the commons will continue in their preſent ſtate for ever, unleſs ſuch a meaſure as I am recommending, is paſſed into a law. Indeed, there are much ſtronger reaſons for a general bill, than exiſted in Scotland; for, in that country, the lords of the manor never poſſeſſed any thing like the extent of rights that are held by their brethren in England; and the burden of tithes, which in the former country was previouſly done away, abſolutely debars every ſtep to procure a diviſion in the other, unleſs a previous bargain is made with the owners.

The very cuſtoms of the different townſhips, and the obſtinacy and prejudice of the poſſeſſors, effectually prevent any material improvement being made, except with the unanimous approbation of every tenant of the townſhip; and when we reflect upon the general perverſeneſs of human nature, it may eaſily be ſuppoſed, that ſuch a conſent is very rarely gained. Inſtances are known, where turnips have been ſown upon the break cuſtomarily kept under naked fallow, and that the neighbours have turned in their beaſts upon them, without being liable to damages; as alſo, where clover has been ſown, inſtead of a corn crop, the ſtock of the townſhip has deſtroyed it during the Winter months, without legal redreſs being procured. Experience ſo fully proves the impolicy of keeping land in a ſtate of commonage, that

that a wiſe Legiſlature would be juſtified in taking ſtrong meaſures to annihilate ſuch a tenure, however arbitrary the meaſures at firſt ſight might appear.

As we advanced ſouthward, we did not find huſbandry practiſed in the perfect manner we expected, and common-fields were conſtantly occurring to our view, which were no better cultivated than thoſe we had ſeen formerly. An old gentleman in company aſſured me, that he had travelled this road in 1751, and was not ſenſible of any alteration having taken place in rural economy ſince that period: The ſame remark will probably be made fifty years hence, if a diviſion-bill is not paſſed. To obſerve a fine country ſo miſerably managed, ſickens the mind, and makes it turn from the ſcene with diſguſt.

At *Barnet*, we got into another climate, and the growth of every thing was further advanced than in any diſtrict we had paſſed through. Betwixt this place and LONDON, the hay crop was in hand; and the ſeveral proceſſes of cutting, winning, and ſtacking, were going briſkly forward. The crops in general did not appear weighty, not exceeding 150 ſtones per acre, and all of the kind called natural or meadow-graſs. The ſmallneſs of theſe crops will not excite ſurpriſe, when it is conſidered, that the fields are ſo frequently cut, which as effectually ſcourges land, as the ſevereſt courſe of corn crops. Very little land under the plough is here to be ſeen; and what came within our view, did not appear carrying heavier crops than what may be found in other ſituations, where the means of improvement are not ſo plentiful.

We have now entered the *great city*, where we will continue for a few days; and my next ſhall contain a detail of ſome of the wonders which come under our obſervation, though perhaps rather incongruous with the general purpoſes of theſe letters. And I am, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

IF you consider what follows, as throwing any light upon your first query upon practical subjects, you are at liberty to make use of it.

The disease in wheat, called *smut* *, is perhaps more dangerous to that most valuable grain, than all other disorders united, to which, in this island, it is subject.

Though the cause of this destructive contagion will probably, like many other *arcana* in nature, for ever evade the feeble researches of mankind; the preventive, and even cure of the malady, is a simple process. A *complete* wetting with urine, or with a strong pickle of salt and water, and a drying with quicklime, I can, from twelve years *experience*, assert are a certain preventive.

A person, in whose accuracy and veracity I have every reason to confide, has assured me, that, by repeated washing with the above mentioned liquids, he, in one season, completely cured a quantity of wheat for seed, full of balls, and deeply infected with smut. I have also been informed, by that enlightened agriculturist, JOHN ERSKINE Esq. of Marr, that a gentle kiln-drying of wheat intended for seed, and driving it twice through the fanners, immediately on being taken off the kiln, will prevent smut. The fanners must be driven smartly, and none of the light grain used for seed. This mode of prevention, Mr Erskine assured me, was successfully practised in the county of Clackmannan. Both these ways of treating seed-wheat are pretty generally known in North-Britain, particularly the former.

Unless wheat is sown within an hour and a half after being wetted with urine, it ought immediately to be spread thin upon the floor of a granary till quite dry, otherwise the powers of vegetation may be destroyed. If this precaution of spreading and drying be taken, the grain may be

* The miserable quackery and vague conjectures often attempted to be imposed upon the agriculturists of this country, as the origin of *smut* in wheat, and *curl* in potatoes, shall afterwards be submitted to the public.

be preſerved for ſeveral months in perfect ſafety. This method of preſerving wheat for ſeed, after being pickled and prepared for ſowing, was communicated to me by an agriculturiſt, eminent in his profeſſion, and who had perſonal experience of the practice. I am, &c.

J. S.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Drilling Beans.

GENTLEMEN,

AS I obſerve you wiſh to receive communications reſpecting experimental agriculture, I do myſelf the pleaſure of tranſmitting you the reſult of the firſt attempt made by me to cultivate beans according to the drill ſyſtem, which was executed at a time when that important branch of huſbandry was but recently introduced into this country, and, conſequently, imperfectly underſtood.

I marked off an acre of ground, the ſoil a light free loam, which had carried a crop of oats the preceding year. It was deep ploughed in Winter, and received dung previous to the ſeed-furrow, which was given as ſhallow as poſſible, in order that the plants might have ſufficient ſoil to ſtrike down their roots. I divided it into three parts. Part No. 1. was drilled with intervals of 27 inches, or, in other words, the harrow followed every third plough. No. 2. was drilled after the ſecond plough, which reduced the intervals to 20 inches, or thereby. No. 3. had intervals of the ſame breadth as No. 1.; but two rows ſtood together, or in each furrow, which gave me about the ſame number of drills as ſtood on part No. 2., and about one third more than part No. 1. They were ſufficiently harrowed immediately before brairding, carefully hand-hoed afterwards, and, finally, bulked up with a neat double-moulded board plough, which performed the work in a very perfect manner. The crop at harveſt was good; but, when cut, the ſtalk was ſmaller, and the pods not ſo well filled, upon thoſe which occupied No. 2., as upon the other two diviſions, where the intervals were wider, and

consequently a freer admission given to the air, which I have since found to be necessary in the culture of every article of the leguminous kind. When the crop was thrashed, I had one firlot more beans upon No. 1. than upon No. 2; and No. 3. only returned me the same produce as No. 1, though it contained several more drills: besides, owing to the double rows, it was nothing like so well cleaned. The inferences which I drew at the time, and which have since guided my conduct in this branch of husbandry, were, 1st, That a certain portion of air was required to bring beans to perfection; and that the quantity to be procured, when the intervals were only 18 or 20 inches, was not sufficient for that purpose. 2d, That intervals less than 27 inches would not admit the full benefit of ploughing, which is a chief object in the drill husbandry: And, lastly, That double rows, with wide intervals, were not advantageous, as they neither returned a greater produce, nor allowed the ground to be so well cleaned as single rows.

I have, since the above trial, uniformly drilled beans upon a great scale, according to the first mentioned method, with this single alteration, that the hand-hoe is laid aside, and the whole operations performed by horse labour. The different ploughings are given with one horse, and are repeated according to the nature of the soil, and the dryness of the weather. This is the cheapest and most effectual way of cultivating beans: and indeed it is now very generally practised. I am, &c.

A Rural Economist.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Loose Hints on the Principles and Practice of Rural Science.

GENTLEMEN,

AGRICULTURE is an art generally practised with so little attention to principles, that a superficial observer may be led to conclude, it is incapable of being regulated by any

any thing like fixed and precise rules. If we turn our eyes upon the cultivators of the ground, we will discover, that the great body of the profession are rather influenced by custom and prejudice, than guided by rational motives; while, on the other hand, many scientific and enlightened men are as often defective in the practical department of this important art. The first class generally view theoretical knowledge with contempt; while the other is ready to place too much dependence upon it, and to neglect the solid and useful information to be learned in the school of experience.

I am inclined to think, that the conduct of both classes equally deserves censure; and that a good farmer must necessarily be intimately acquainted both with the principles and practice of rural science. Unless he is acquainted with principles, it is impossible for him to search after improvement; and, if he is unacquainted with practice, his knowledge can be of little, or no real utility. It is evident, that every art will advance in direct proportion to the means of information possessed by those who are concerned in carrying it on; and experience fully proves, that, in every part of Britain, improvements have gone hand in hand with the progress of knowledge. Hence, the scientific farmer, if he bestows suitable attention to practice, will necessarily make a greater figure in his profession, than one whose knowledge is altogether limited to the operative branches of husbandry.

It is unquestionable, that a very great change has, within these few years, taken place in the character and conduct of British farmers; which promises to be of important service to the cause of agriculture in general. Instead of being taught to hold a plough, to drive a cart, or to sow (which, in former times, were considered to be the only qualifications necessary for a farmer), we notice, that a liberal education has, of late, been given to those intended for that profession; which must necessarily expand their minds, and remove every prejudice. In those districts where such advantages are not enjoyed, little or no alteration has taken place in the practice of husbandry; which continues in a stationary position, without any attempts being used to keep pace with the great improvements in other sciences.

Perhaps, Lord Kames's *Gentleman Farmer* was the firſt publication of the kind which proved really beneficial to the Scotiſh farmer; as opinions are therein conſtantly ſubjected to the teſt of rational principles. His Lordſhip followed the plan laid down by that prince of philoſophers, Lord Bacon; and formed his theory from facts; which is directly the reverſe of the ancient, or Ariſtotelian ſyſtem. If every landed gentleman in Scotland poſſeſſed his Lordſhip's knowledge, and every farmer was as attentive to practice, then might we expect, that improvements in rural ſcience would advance with rapid ſtrides; and that, in proceſs of time, every part of the country would be cultivated like a garden, without a ſingle ſpot being left in a waſte or unproductive ſtate. I am,

Yours, &c.

A Friend to Improvements.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Papers concerning the Introduction of Barley Mills into Scotland.

GENTLEMEN,

THE following curious and intereſting papers were lately communicated to me by Mr Andrew Meikle, the ingenious mechanic who invented the thraſhing machine now in common uſe; and, as they afford authentic information reſpecting the introduction of the barley mill into Scotland, I truſt you will conſider them as worthy of being handed down to poſterity through the channel of your Magazine. Mr Meikle is the only ſurviving ſon of James Meikle, who went to Holland in 1710, agreeable to the articles of agreement entered into with Mr Fletcher; and he authoriſes me to ſay, that his father, along with the materials for the barley mill, brought over a winnowing machine, or what is commonly called a pair of fanners; which identical machine, or, at leaſt, a part of it, remained at Salton barley mill a few years ago, and probably is uſed at this date. It is only neceſſary to add, that Andrew Fletcher, Eſq., ſtyled in the

articles

articles of agreement, *Laird of Salton*, was in Holland in the year 1710; from whence, it is probable, he had written to his brother to ſend over James Meikle. One of his letters, dated *Hague*, 18*th June* 1710, is ſent you, as a proof of the above circumſtance. Mr Meikle, after having perfected himſelf in the barley making art, returned ſafe to Scotland, with the neceſſary materials, and the mill was immediately erected, and, for a conſiderable number of years, was the only machine of the kind in the Britiſh dominions.——I am, &c. N.

Articles of Agreement between HENRY FLETCHER *and* JAMES MEIKLE.

IT is agreed, betwixt Henry Fletcher, brother to the Laird of Salton, on the one part, in the name of his ſaid brother, and taking burden upon him for the ſaid Laird of Salton, and James Meikle, wright in Weſter Keith, on the other part, that they ſhall keep and perform to one another, according to the tenor of the following articles, *viz.*

1. That the ſaid James Meikle ſhall go to Holland with the firſt fleet that ſails thither, after the date of thir preſents, and learn there the perfect art of ſheeling barley; both that which is called French barley, and that which is called Pearl barley; and how to accommodate, order, and erect mills for that purpoſe, in ſo far as he can, with his uttermoſt induſtry, and recommendations given him.

2. That, as ſoon as the ſaid James Meikle ſhall find himſelf ſufficiently inſtructed in ſaid art, he ſhall return with the firſt fleet, or man of war, he can have ſafe paſſage in, for Scotland or Newcaſtle. That, in the mean time, if he ſhall be forced to wait, he ſhall endeavour to inſtruct himſelf in any other uſeful trade or manufactory.

3. That when he returns to Scotland, he ſhall be obliged to communicate the arts he has learned, to *Salton*, or any whom he ſhall appoint, and ſhall communicate them to no other perſon, but by *Salton*'s permiſſion.

4. That *Salton* ſhall pay all the ſaid James Meikle's expences in going and coming, and in learning ſaid arts.

5. That the ſaid James Meikle ſhall be maſter of the ſheeling-mill, if he think fit, and ſhall have a proportional allowance for it, according to the profit it yields; or a yearly ſalary, according as two honeſt men, choſen for that end, ſhall determine. But if the ſaid James Meikle ſhall not think fit to employ himſelf in this manner, but can do better otherwiſe; then he ſhall be obliged to teach the art of ſheeling French barley and Pearl barley to any whom *Salton* appoints, he being paid for the time he employs therein. And beſides, in this caſe, *Salton* ſhall give him a handſome reward for the pains he has been at, and the art he has taught, he then going out of *Salton*'s ſervice, and not profiting any more by the mill. And then the ſaid Meikle ſhall renew his obligation, not to make uſe of this art himſelf, nor teach it to any other.

6. That if it ſhall happen, that the ſaid James Meikle ſhall be taken priſoner, either going or coming, *Salton* ſhall be obliged to relieve him, and pay all his expences.

7. That if it ſhall happen, that the ſaid James Meikle ſhall die abroad in his voyage, then *Salton* ſhall be obliged to give his wife and children 100 merks.

8. That the ſaid James Meikle, from the time he parts from his own houſe, to go to the ſhips, till he return, ſhall be allowed every day two ſhillings Sterling; to wit, one ſhilling for his entertainment, and one ſhilling for his work; and ſhall give a receipt for any money he gets with him, or any letter of credit he gets, and account for them accordingly when he comes back.

Both parties oblige themſelves to keep the foreſaid articles, under the penalty of 500 merks, by and attour performance. In witneſs whereof, they have ſubſcribed thir preſents, written by the ſaid Henry Fletcher, at Salton, this 17th of April 1710.

H. Fletcher.
Ja. Meikle.

Copy

Copy of a Letter from Andrew Fletcher Eſq. to James Meikle.

JAMES, *Hague, 18th June* 1710.

I RECEIVED yours of the 14th, and doubt not but you have got the barley before this comes to your hand. As for theſe big pieces of iron work you ſpeak of, which will be neceſſary for ſetting up a mill for ſheeling barley, pray cauſe make them; and let them, and every thing elſe, which you think neceſſary to buy in this country, be ready as ſoon as may be. As for the time of your ſailing, it is uncertain; but you muſt be at Rotterdam by the time the ſhips fall down, which I ſhall have timeous advertiſement of, and come to bring you away. I believe you may expect me about Friday or Saturday, the 27th and 28th of this month; ſo, let all be ready againſt then; and adviſe with Mr Moriſon, if you find difficulty in any thing.

I am,

Your aſſured Friend,

A. FLETCHER.

P. S. If you want money for paying for the things that are to be bought or made, Mr Moriſon will furniſh you. Tom is well again, and I have writ to tell your wife that you are ſo.

FOR THE FARMER'S MAGAZINE.

Account of the Introduction of Summer Fallow into Scotland; with ſome particulars of John Walker who firſt practiſed it.

IT is a curious circumſtance in the annals of Scotiſh huſbandry, that notwithſtanding *Summer fallow* had been prevalent in England ſince it was under ſubjection to the Roman

Roman government; yet this radical improvement was neglected in Scotland, till the concluſion of the 17th, or beginning of the 18th century. From the intimate connexion which ſubſiſted betwixt the two nations after the acceſſion of James VI., it excites ſurpriſe, that this and other improvements did not immediately croſs the Tweed; and that the different practices of our enlightened neighbours were not earlier imitated by the Scotiſh agriculturiſts. As we are, however, certain this was not the caſe, we muſt ſuppoſe, that ſome very cogent reaſons operated to prevent the introduction of Summer fallow, which was the only method then known for cleaning the ground in an effectual manner. It is more than probable, that the general diviſion bill, paſſed by the Scotiſh Parliament 1695, contributed to promote this and many other improvements; for, before the enactment of this ſalutary law, a conſiderable part of our beſt lands remained in *run-ridge*, or in a ſtate ſomething ſimilar to what is ſtill cuſtomary in many of the richeſt Engliſh counties. As it is found impracticable, under common-field tenure, to introduce the turnip and graſs huſbandry, without the ſpecial conſent of all the perſons concerned, we are inclined to believe, that the ſame circumſtance would operate in retarding the reformation of the Scotiſh cuſtomary practices. If Summer fallow had not been practiſed in England previous to the eſtabliſhment of common fields, it is certain, that the like difficulties would have attended its poſterior introduction, as are at this day experienced in the other branches of huſbandry above mentioned.

Be theſe things as they may, it is undoubtedly true, that Summer fallow was not practiſed in Scotland earlier than the concluſion of the 17th century; for, in a book intituled, "*Huſbandry Anatomized*," publiſhed at Edinburgh in 1697, and ſuppoſed to be the moſt ancient treatiſe upon rural œconomy in Scotland, we find the fallowing of land recommended in a manner, which ſhows that it was not then known in the country. The author had ſerved in Flanders during King William's wars, as an officer of the Earl of Angus, or Cameronian Regiment, and attained perfect knowledge of this fundamental improvement among the *Flemings*, whoſe practice he fully deſcribes.

The firſt perſon who actually fallowed land in Scotland,

land, or, in other words, prepared it for a crop by repeated ploughings and harrowings during the Summer months, was JOHN WALKER, tenant at Beanſton in the county of Eaſt Lothian. Mr Walker was a reſpectable character in his profeſſion, and was chief of a family long diſtinguiſhed among the cultivators of that diſtrict. He was the intimate friend of the celebrated Sir William Bennet, Bart. (to whom the honour of writing the Gentle Shepherd has been generally attributed), who uſually ſpent a good part of his time at Beanſton; and this intimacy affords a ſtrong preſumption, that Mr Walker had received a liberal education, and poſſeſſed a larger ſtock of knowledge than was then common among the generality of his brethren.

The circumſtance which induced him to attempt this beneficial improvement, as we are informed by one of his deſcendants, proceeded from a converſation with ſome Engliſh travellers on a tour through Scotland, with whom he ſpent an evening, and who communicated the neceſſary information reſpecting the method uſed by our ſouthern neighbours in the fallowing of land. Reſolving, in conſequence of their ſuggeſtion, to try the efficacy of Summer ploughing, he next year left a field unſown, conſiſting of ſix acres of heavy loam, immediately to the weſtward of the preſent ſtack-yard of Beanſton Mains; and the attention of his neighbours was immediately fixed upon what they conſidered to be a newfangled and fooliſh experiment. Some of his ſapient friends concluded that his mind was deranged; while others, of greater prudence, ſagely conjectured, that poverty was the real cauſe, and that money was wanting for purchaſing ſeed. Mr Walker, however, went on coolly with his operations; and the field, after being dunged, was ſown with wheat, and produced a crop which effectually ſilenced the obſervations of his neighbours.

The next year, he ſucceſsfully increaſed the ſize of his fallow break; and the practice, in a ſhort time, rapidly ſpread over all the county of Eaſt Lothian. From Maxwell's Collections, we learn, that ſo early as 1724, it was commonly practiſed upon all the ſtrong ſoils in that county every fifth or ſixth year; and to its introduction may, in a great meaſure, be attributed the acknowledged

knowledged ſuperiority which that diſtrict early attained in the different branches of rural ſcience.

The late Lord Milton, who had the beſt opportunity of knowing every circumſtance relative to the introduction of fallow, was eager to procure the erection of a pillar to the memory of Mr Walker, upon which a full detail of the different particulars was to have been inſcribed; but the hurry of public buſineſs, in which that eminent perſonage was conſtantly engaged, prevented this laudable propoſal from being carried into execution. Sir Francis Kinloch, Bart. who was contemporary with Mr Walker, and who reſided within half a mile of his farm, alſo earneſtly adviſed the family, after his deceaſe, to record this important matter upon his tombſtone. It is, however, unneceſſary to dwell upon theſe things, as the different circumſtances attending this firſt attempt to renovate the huſbandry of Scotland, and the ſucceſs which accompanied it, are ſo well known, as to render further obſervations unneceſſary.

Mr Walker was likewiſe the firſt perſon in Scotland who ſowed wheat upon what was then called *out-field* land, which, previous to the introduction of fallow, could not have been effected with profit. By the gradual extenſion of this practice, the low lands of Eaſt Lothian have, for a conſiderable number of years, been kept under a regular courſe of corn crops, which formerly was only practicable upon the in-field or crop grounds.

In a word, the merit of this eminent and diſtinguiſhed farmer deſerves to be tranſmitted to poſterity with marks of applauſe; and, if Swift ſpeaks truth in his celebrated adage, he conferred greater benefit upon mankind, and performed more eſſential ſervice to his country, than the whole race of politicians put together.

N.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Danger attending Trees about Corn Fields.

GENTLEMEN,

I have read your Firſt Number with great pleaſure, and I hope it will anſwer your intention of being both uſeful and entertaining to the public.

If you think the following obſervations deſerve a place, you may inſert them when convenient. I am one of many who have ſuffered ſeverely, this laſt harveſt, in conſequence of my corn fields being ſurrounded with high trees and hedges: A more diſtreſſing ſituation to the huſbandman can hardly be conceived. What muſt he ſuffer, to ſee a great portion of his produce going to deſtruction, which cannot be ſaved by any exertion, or additional expence on his part? How much more fortunate is he, whoſe corn fields are open to the free circulation of air, which is equally beneficial to the health of plants and animals? It is only in open fields you find grain alike in colour and ſize, well ripened and completely plump; whilſt grain, raiſed on incloſed fields, will be found ill-coloured, ſmall, and unequal. In ſhort, a corn farmer, who has his fields ſurrounded with high trees and hedges, has to encounter great difficulties every ſeaſon of the year.

I have mentioned his woful ſituation in Harveſt: In Spring, the high ſhelter prevents his grounds from drying; of courſe, he is kept back from ploughing and ſowing: In Winter, when the ſnow drift is blowing, the trees and hedges prepare a reſting place for large quantities of ſnow, which frequently remain all Winter, and ſtop his Spring work: In Summer, his corns are liable to mildew, and to many other diſeaſes, for want of air; and how much does he ſuffer from large flocks of ſmall birds eating the crop? But he who has his fields incloſed with hedges without trees, and properly divided in a due proportion to the extent of his farm, may enjoy all the advantages of reſtoring his exhauſted land by reſt and paſture, and, when in a corn rotation, he can cut down his hedges, and ſecure a free circulation of air. A moderate portion of ſhelter, when

grounds

grounds are in paſture, may be uſeful; but if incloſures are very ſmall, and trees and hedges very high, the loſs of ground is conſiderable; beſides that the quality of the graſs under the branches of the wide ſpreading trees, although not leſs in quantity, will be very inferior in quality: And how much are cattle hurt by the ſwarms of vermin that are bred from, and come forth in the months of July and Auguſt, and render thoſe two months of little value to the graziers?

We are told by good authority, that Britain, in the beſt of ſeaſons, cannot grow enough of corn to ſupply her conſumption; therefore every impediment to the growth of that uſeful and neceſſary article ſhould be removed: But, to accompliſh theſe advantages, in many inſtances, I muſt appeal to the feelings of all warm-hearted patriotic landlords, who may have their tenants bound to plant and rear trees, where trees ſhould never grow—on corn fields. If they are real lovers of their country, they will cheerfully allow thoſe trees, that are doing ſo much harm, to be rooted out and deſtroyed, and they will be fully rewarded, by increaſing the value of their ground, and in giving the pleaſure of ſeeing the fields richly covered with full crops of healthy yellow corn.

Hedge-row trees are often to be ſeen in a very unthriving ſtate, in which caſe, they are diſagreeable objects; and when they happen to thrive, in proceſs of time, they prove the deſtruction of the hedge.

I am, &c.

VERUS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the New Mode of Drainage.

GENTLEMEN,

I remember having obſerved, ſome years ago, a diſpute in the public papers concerning the new mode of drainage, the merit of which was claimed by two reſpectable and ſcientific gentlemen, viz. Dr James Anderſon and Mr Elkington; but I am inclined to believe, that the chief,

chief, and perhaps the real utility of this improved method of draining, had been previouſly aſcertained by a worthy farmer in the county of Eaſt-Lothian, to whoſe grandfather Scotland is indebted for the introduction of ſummer-fallow. The reaſon which influenced him to try the effect of *pitting*, was, that in attempting to drain a field by the ordinary method then practiſed, he had miſſed the *ſpout* or burſt which occaſioned the wetneſs, and, in order to catch it, was induced to dig down in a circular form, till a bottom of ſand appeared, when the water ſprung up with inexpreſſible force. It then occurred, that by filling up this pit or well with land ſtones, and making a communication with the leading or main drain, that the object intended would be effectually accompliſhed. This was done accordingly, and the ſpot of ground which required draining, was immediately laid as dry as the other parts of the field. The ſame perſon afterwards repeated the trial upon ſeveral other fields, and was equally ſucceſsful as in the inſtance above mentioned.

A certain gentleman, now deceaſed, who was characteriſed by Mr Wight, in his State of Scotiſh Huſbandry, publiſhed in 1778, as a "farmer of the firſt rank," witneſſed the trial, and was perfectly ſatisfied reſpecting its utility. I may only add, that the experiment was made in 1750, at which period it is probable Mr Elkington was not in life, and long before the time when Dr Anderſon communicated his ſentiments to the public, relative to the new mode of drainage.

If this information appears of any importance, I hope it will procure a place in your next Number.

I am, &c.

A Friend to Merit.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE

On the Advantages of Agricultural Publications.

GENTLEMEN,

As a friend to Britiſh Agriculture, which I conſider as one of the chief pillars of the State, I beg leave to expreſs my hearty approbation of the deſign in which you are engaged, being convinced that important advantages may be derived from ſuch a Publication. I have long wiſhed to ſee a regular Agricultural Pamphlet, and remember well the attempt made by Mr Auld, to publiſh ſomething of that kind about twenty-five years ago, which failed for want of correſpondents and public countenance. I approve ſo much of your Firſt Number, that I ſhall be very glad to contribute any aid in my power to the ſucceſs of the undertaking; truſting that, under the direction of practical men, agriculture may be reſcued from the hands of ſpecious theoriſts, who have, in many inſtances, ſeized upon a ſcience, which evidently belongs to profeſſional people.

The only opinion or advice which I can think of hazarding at preſent relative to your work, is, that care ſhould be taken not to admit papers liable to miſlead the practical farmer, or to ſerve the purpoſes of thoſe vulgarly called *jobbers*. In Mr Auld's Scots Farmer, many papers were inſerted totally inapplicable to the huſbandry of Scotland, and conſequently uſeleſs to his readers: A want of arrangement was alſo conſtantly diſcernible: And I have reaſon to believe, that theſe and other defects proceeded from the editor being ignorant of the art propoſed to be elucidated in the courſe of the publication.

With reſpect to one grand point of improved huſbandry, the uſe of the *Drill Plough*, I ſhould be glad to ſee facts and conſequences well ſifted and examined, in your Magazine; being of opinion, that, properly attended to, it may be of the moſt important benefit to agriculture, and to manufactures, by increaſing and cheapening every produce of nature, applicable to the food of the people. Likewiſe, I ſhould wiſh to ſee much attention paid to every kind of labour, and every ſpecies of economy capable of being adopted with advantage in our Britiſh Georgics; by which means, and

thoſe

thoſe only, Great Britain may be enabled, in ſpite of moſt adverſe circumſtances, with her capital, ſkill, and dexterity in the arts, to come, on advantageous terms, in competition with foreign markets, in the new condition of things that is faſt approaching in Europe, owing to a general ſpirit of improvement and adventure.

I particularly approve of the full account of markets, and ſtate of rural economy given in the laſt branch; and hope that the greateſt exertions will continue to be uſed to make this part of the work as full and complete as poſſible. I am, &c.

Agreſtis.

FOR THE FARMER'S MAGAZINE.

Abſtract of the Propoſals for Eſtabliſhing, by Subſcription, a new Inſtitution, to be called The Plough, or Joint Stock Farming Society; for the purpoſe of aſcertaining the Principles of Agricultural Improvement; ſubmitted to the conſideration of the Friends to Agricultural and other Public Improvements.

By Sir John Sinclair, *Bart. M. P.*

It can hardly be doubted, that the art of *Agriculture* can never be brought to any high degree of perfection, unleſs by means of experiments, accurately tried, and perſevered in for ſome time. We have hitherto, in general, relied too much on vague opinions and aſſertions, which have not been warranted by ſufficient authority; whereas, nothing but accurate and repeated experiments can thoroughly improve the agricultural art, and aſcertain the principles on which it ought to be conducted. On theſe, and other grounds unneceſſary here to dwell on, Mr Arthur Young, Mr Marshall, in a recent, and in former publications, Dr Francis Home, and other diſtinguiſhed agriculturiſts, have repeatedly urged the advantage of having farms eſtabliſhed for that ſpecial purpoſe. The importance of ſuch farms to the different diſtricts in which they were reſpectively placed, has been put beyond all queſtion, by the authors above

alluded to; and I truſt it will appear, in the courſe of the following obſervations, that no meaſure can be ſuggeſted, more likely to be attended with advantageous conſequences to the inhabitants of the metropolis, or of any conſiderable and flouriſhing town, than that of having an *Experimental Farm*, on a great ſcale, in its immediate neighbourhood.

I. From the increaſing population of London, and of the other large towns in the kingdom, it is impoſſible they can be ſupplied with proviſions at a reaſonable rate, unleſs the agriculture of the country is brought to a high degree of perfection; which can only be done through the medium of Experimental Farms, the only ſure means of aſcertaining the principles of improvement. At preſent, the nation is under the neceſſity of depending on foreign induſtry and cultivation for a part of its ſubſiſtence; and we are periodically viſited with a ſcarcity of food, which increaſes the expences of living to every family in the kingdom, and loads the rich with heavy additional burdens to maintain the poor, and to preſerve them from the miſeries of famine. A ſmall portion of that ſum, the exaction of which thus becomes ſo frequently neceſſary, were it properly applied to the improvement of agriculture, would ſoon enable this country to feed itſelf, and indeed would put it in the power of the farmer to ſupply the public with proviſions at a reaſonable rate. Hence, it is evident, that every man who pays 15d. inſtead of 9d. for a loaf of bread, or 10s. per pound, inſtead of 2s. for poor rates, ought to conſider himſelf eſſentially intereſted in promoting agricultural improvements, and ought for his own intereſt, to ſupport any meaſure calculated for that purpoſe, as far as his circumſtances will admit of.

II. It is well known, that there is ſcarcely any part of the kingdom, where greater quantities of waſte and unproductive land are to be found, than in the neighbourhood of London; or ground, in many inſtances, more capable of improvement. It is to be hoped that the General Bill of Incloſure will ſoon paſs, in conſequence of which, thoſe waſtes will be divided. But that will be of little avail, unleſs the means of improving them are aſcertained. When Enfield Chaſe was divided, many perſons expected to make conſiderable profit, by purchaſing

chaſing and improving portions of that waſte; but, from ignorance how to go about it, the greater part of theſe undertakers ſuffered by the attempt; whereas, had the principles of improvement been accurately aſcertained, by means of Experimental Farms, no error of any great magnitude could have been committed; and the purchaſers of Enfield Chaſe would have improved the land they purchaſed, greatly to their own, and to the public benefit.

III. There are numbers of perſons in the city of London, and in other large and flouriſhing towns, who accumulate conſiderable fortunes by Commerce, by the Law, by the practice of Medicine, and other lucrative profeſſions, whoſe ultimate object is, to retire into the country, and to reſide on an eſtate purchaſed by the profits of their own induſtry and exertions. But, after having purchaſed an eſtate, how can they manage it to advantage, or carry on the improvement of their property, without having previouſly acquired the knowledge neceſſary for that purpoſe? Many have attempted it, but have ſeverely ſuffered by it; whereas, were there an Experimental Farm in their immediate neighbourhood, which, as ſubſcribers, they had it in their power occaſionally to viſit, the books of which would always be open for their inſpection, they would be enabled to acquire, in fact, without expence, (for their ſubſcriptions to the Experimental Farms will ultimately be repaid, with compound intereſt), much knowledge and experience in the beſt modes of managing landed property, and of carrying on every ſpecies of improvement, of which they may avail themſelves with peculiar advantage, when they are enabled, from the profits of ſucceſsful induſtry, to purchaſe eſtates in the country.

Lastly, Many of the inhabitants of London are led, for the ſake of recreation or health, occaſionally to ſpend ſome time in the country. At preſent, many of them leave town without having any particular object when they make ſuch excurſions; but if accommodation were provided for thoſe who wiſhed to viſit the Experimental Farm, and plots of ground allotted in its neighbourhood, where cottages or villas might be erected by the ſubſcribers, what an advantage would it not be to the promoters of the propoſed inſtitution? In that caſe, when

they went to the country, they would have an opportunity of directing their attention to the moſt important inquiries, and of collecting information on a ſubject, in which, in various reſpects, they muſt feel themſelves deeply intereſted. Such an advantage ought certainly to be reſtricted to thoſe who are ſubſcribers to the propoſed inſtitution; and muſt appear, to every intelligent perſon, a circumſtance of the higheſt importance to any individual reſiding in the metropolis, in the adjoining villages, or in any conſiderable town in the kingdom.

Explanation of the Manner in which the propoſed Plan is to be carried into Execution.

THOUGH a capital of 80,000l. would be neceſſary to carry the propoſed meaſure into complete effect; yet, from 10,000l. to 20,000l. will be ſufficient to give the plan a fair beginning, either with an Experimental Farm, or an extenſive Plantation, or with both, in the neighbourhood of the metropolis. It was never intended to let the meaſure drop, if the whole capital could not be raiſed at once; for, however deſirable it might be to carry a great ſcheme into execution, becauſe it commands the attention of thoſe who take a concern in its management, and muſt neceſſarily produce more public good; yet the important object certainly is, to lay a ſolid foundation, which may afterwards be extended, as circumſtances will admit of.

As ſoon as a proper farm can be eſtabliſhed near the metropolis, accompanied with an extenſive plantation, the profit of which muſt at leaſt inſure indemnification to the ſubſcribers, there will then be a model held forth, which every county in the kingdom may adopt, that approves of ſuch an idea; and it is, without doubt, much to be wiſhed for, that ſeveral Experimental Farms and Plantations were eſtabliſhed in various parts of the country, as branches of the ſame inſtitution; not only for the purpoſe of comparing the reſult of the ſame experiments, carried on by different people, and in a diverſity of ſoils and climates, (by which a ſpirit of emulation would be excited among the managers appointed to conduct them), but alſo as it would have the happy effect of

of directing, with greater force, the attention of the public to an inſtitution, which, inſtead of being confined to any particular diſtrict, extended its beneficial influence from one end of the iſland to the other. Unleſs, however, the money neceſſary for that purpoſe, is in a great meaſure advanced by the proprietors and farmers, where ſuch farms and plantations ought to be ſituated, and the management of them overſeen by committees of gentlemen reſiding in their immediate neighbourhood, who would undertake that trouble, and who were intereſted, as ſubſcribers, in the ſucceſs of the undertaking, it would be in vain for any inſtitution formed in London, to endeavour to carry ſuch a plan into execution, upon the extenſive ſcale ſuggeſted in the original propoſal.

As in various parts of the kingdom, however, particularly in the weſtern and midland diſtricts, in the counties of Durham and Northumberland, in Wales, and in Scotland, the eſtabliſhment of Experimental Farms has long been a favourite object, there can be no doubt, that, by exertion and perſeverance, the meaſure of having a number of Experimental Farms, conducted under the auſpices of the ſame inſtitution, will ultimately be accompliſhed.

Anſwers to ſome Objections which have been urged to the propoſed Inſtitution *.

First Objection. *That no Experimental Farm at all is neceſſary.*

It is ſuppoſed by ſome, that no Experimental Farm at all is neceſſary; and that the principles of agricultural improvement will be brought to a ſufficient degree of perfection without ſuch an eſtabliſhment. That grain may be raiſed, and cattle bred, without the aid of

* We were promiſed by a Correſpondent, ſome obſervations upon the propoſals originally circulated; but we are ſince informed, that the judicious manner in which the objections to the propoſed inſtitution are anſwered in this abſtract, renders the performance of his promiſe altogether unneceſſary.

Experimental Farms, may be ſafely acknowledged; in the ſame manner, as, in early ages of ſociety, manufactures were carried on for domeſtic purpoſes, without the aid of much machinery. But, no ſooner had the population and commerce of a country increaſed, than it became neceſſary to improve the art of manufacturing even the moſt common articles, by means of new inventions; and it is equally neceſſary to improve the art of agriculture, ſo as to produce more grain, and to feed more cattle on the ſame extent of ground, otherwiſe it will be impoſſible to furniſh food to the increaſing population of a country. Without Experimental Farms, this cannot be effected: Without ſuch eſtabliſhment, it is impoſſible to aſcertain what practices ought to be avoided, and what ought to be purſued. The former is as important to be known as the latter; yet they are ſeldom communicated to the public, becauſe the farmer is in general aſhamed of acknowledging his want of ſucceſs; and indeed, where his experiments anſwer, they are frequently concealed, leſt others ſhould avail themſelves of ſuch diſcoveries. The object of an Experimental Farm, however, is to aſcertain facts, and to publiſh them; and as much credit would be acquired by an intelligent and public-ſpirited Society for their exertions in detecting errors, as in proving facts likely to be uſeful.

Second Objection. *That there are many Experimental Farms now carried on by individuals, which will anſwer the ſame purpoſe.*

It is ſaid, in the ſecond place, that there are many diſtinguiſhed characters, who carry on experiments for their own amuſement and information, by whoſe means every important fact will, in proceſs of time, be aſcertained. No man is more diſpoſed to do juſtice to the merits of the reſpectable perſonages above alluded to, than I am; nor can be more convinced, that their example is of infinite advantage to thoſe who have the means of examining the progreſs they make. Their farms, however, are more properly to be accounted *pattern farms*, for the advantage of their own immediate neighbourhood, than experimental ones, in the ſtrict ſenſe of that word. In order to render, indeed, Experimental Farms generally uſeful, the farms muſt be open to the inſpection of the public; the account of each experiment muſt be regularly publiſhed;

and

and every experiment, likely to affect the cultivation of any part of the kingdom, muſt be tried with the utmoſt preciſion. It cannot be expected, that perſons of high rank, and whoſe attention is neceſſarily directed to other objects, can renounce every other purſuit, and devote themſelves excluſively to the conducting of experiments; whereas, when an Experimental Farm is once eſtabliſhed, it will ſoon be proved, by the evidence of facts, 1. What is the beſt mode of rendering arable land productive, and the proper rotation of crops to be adopted in all ſoils and ſituations: 2. What is the beſt ſyſtem for the management of graſs land: 3. What are the moſt uſeful implements of huſbandry: 4. What are the moſt profitable breeds of animals, and the beſt and cheapeſt mode of rearing, of feeding, and of fattening them: 5. What is the beſt plan for rendering waſte or barren land productive. Theſe are points of infinite conſequence, which never have yet, and indeed never can be aſcertained, unleſs by means of farms appropriated for that ſpecial purpoſe. It will require, it is true, the unceaſing attention of an intelligent manager; and the experiments, in order to be relied on, muſt be made with almoſt mathematical accuracy and ſtrictneſs: The expence alſo muſt be conſiderable; but the ultimate advantage to the public muſt be ſo great, as amply to compenſate for any trouble or coſt which may attend the execution *.

THIRD OBJECTION. *That it will be difficult to find Managers.*

It is an obſtacle to this meaſure, in the apprehenſion of ſome, that it will be ſcarcely poſſible to find managers qualified for that purpoſe. It certainly will be attended with ſome difficulty; but it would be libelling the agricultural ſkill and integrity of the country, to ſuppoſe that ſuch men could not be found. I know ſome, myſelf,

* For inſtance, if the queſtion is—what is the beſt breed of cattle? their food muſt be accurately weighed, and a regular account preſerved of the whole quantity they eat during the courſe of the experiment. If the queſtion is, to aſcertain whether large or ſmall animals pay beſt for the food they eat, the experiment muſt be begun from their birth, and continued till they are ſlaughtered. In ſhort, almoſt every experiment of great conſequence requires a degree of attention and perſeverance, and a duration, in point of time, which can only be expected from a public inſtitution devoted excluſively to that purpoſe.

ſelf, who would carry on the undertaking with zeal and energy; who would take ſome ſhares in the propoſed undertaking, as a ſecurity for their good behaviour, and a pledge of their being intereſted in its ſucceſs; and who, in every other reſpect, would, I am perſuaded, be found perfectly adequate to the taſk. And here, I beg to remark, that it is hardly poſſible to ſuppoſe any perſon placed in a more deſirable ſituation than the Manager of ſuch an Experimental Farm, if he felt a zeal in the cauſe; nor more likely to be detected, if he was either negligent of the duties he had to perform, or was guilty of diſhoneſty. He would lye under the neceſſity of making regular weekly reports of all his tranſactions; the books of the farm would be conſtantly liable to inſpection, and the farm itſelf open to the examination of the ſubſcribers, and perhaps, at ſtated times, of the public. A man, placed in a ſituation ſo peculiarly oſtenſible, muſt be both honeſt and diligent. If he ſucceeds in his management, he has the credit of accompliſhing one of the moſt important objects that any individual could undertake; and, if he is detected in acts of negligence or diſhoneſty, his guilt could not be concealed: it muſt neceſſarily become public, and he is ruined for ever. With ſuch inducements to act well, and ſuch ſerious grounds of apprehenſion, if he ſhould act otherwiſe, it is ſcarcely poſſible to ſuppoſe that any human being, of common underſtanding, could be deficient in his duty.

In regard to the particular plan of experiments to be purſued, the following meaſures may be adopted. As ſoon as a farm is taken, an accurate plan of it ſhould be obtained, diſtinguiſhing the different ſoils, and every other circumſtance connected with it. Every aſſiſtance will then be procured from the moſt ſkilful practical farmers in the kingdom, to draw up a regular courſe of experiments, and a rotation of crops beſt calculated for the different fields; and ſuch a plan muſt be rigidly adhered to by the manager, unleſs the committee of management give directions to the contrary. Thus, the manager will only be accountable for the ſtrict execution of the orders he receives; and, as thoſe orders will be given in conſequence of the moſt mature conſideration, hence the whole ſyſtem, it is to be hoped, will be carried on with the utmoſt regularity and correctneſs. There would not then be a ſingle principle in agriculture, that

might

might not thus be aſcertained in the ſpace of a few years; and farmers, in future, would have an invariable ſtandard to go by, which they might rely on with certainty.

FOURTH OBJECTION. *That the Profits of the propoſed Plantations are overrated.*

It is evidently impoſſible to foreſee what will be the value of timber 30 years hence, as that muſt entirely depend on the quantity brought to market, on the demand, and on the ſtate of credit, and the quantity of money in circulation at the moment. As the price of every article, however, is progreſſively riſing, is there not reaſon to imagine, that it will alſo be the caſe with timber? But even if that ſhould not be the caſe, ſhould timber only ſell at its preſent value, the following circumſtance will ſufficiently prove, that the calculation of profit given in the original propoſals, *is greatly underrated.* The circumſtance alluded to is this:—In the neighbourhood of Edinburgh, there is a conſiderable wood, amounting to above 300 acres, called the Foreſt of Culroſs. It conſiſts of Scots firs, 43 years old. An exact ſurvey has been taken of it, and an eſtimate of its value drawn up. It is ſtated in the advertiſement, that there are 3500 cubical feet of meaſureable timber, the upſet price of which is 6d. per foot; and 6000 running feet of pit-timber, at one farthing per foot. The value of both, per acre, would then be as follows:

1. 3500 cubic feet, at 6d. per foot	L. 87	10	0
2. 6000 running feet, at one farthing per foot - - -	6	5	0
Total, per acre,	L. 93	15	0

It is well known, that the value of larch, at 30 years of age, is equal to that of fir at 45 years. There is reaſon therefore to hope, that the 5000 acres of land, propoſed to be planted with larch, would be worth 90l. per acre, which, for 5000 acres, would amount to 450,000l. inſtead of 218,000l., at which the ſale of the timber, the ground, &c. was originally eſtimated. What the timber in Culroſs Foreſt will really ſell for, is not yet known; but there is every reaſon to believe, that the price muſt be higher than 6d. per foot, and that the calculation of profit from the propoſed plantations, originally ſtated at 218,000l., will be found greatly underrated.

On the whole, I hope it will appear, that though there is no plan, of ſo extenſive and complicated a nature, to which

which ingenious men may not diſcover objections, yet, that none can be urged againſt the preſent propoſals, which may not be ſatisfactorily anſwered; and that, even if ſome difficulties ſhould remain, they ought not to ſtand in the way of carrying a meaſure into effect, of ſuch infinite public importance, which would lay the foundation of rendering this country ſuperior to every other for agricultural ſkill, and conſequently the moſt likely to reach the ſummit of power and opulence.

The following Particulars will explain the Nature of the propoſed Inſtitution.

I. *The propoſed Capital.*

1600 ſhares, at 50l. each - - L. 80,000

It is alſo intended to admit half ſhares at 25l. each; but the perſons holding them, though they will have a right to partake in the pecuniary advantages of the propoſed inſtitution, are not to be entitled to vote in the choice of the directors. The number of ſhares, which each perſon may hold, not to be reſtricted. The directors to be annually choſen in London, and to meet there. The books of the Society to be always open to the inſpection of the ſubſcribers.

II. *Propoſed Expenditure.*

1. To the expence of eſtabliſhing eight experimental arable and grazing farms, in the neighbourhood of London, and in different parts of the kingdom, at 4000l. each, on an average - - - - -	L. 32,000
2. To ditto for two upland farms, for improving mountain ſheep, at 1500l. each -	3,000
3. To the expence of purchaſing 5000 acres of land, incloſing, and planting them with larch, fir, and other trees, and other expences attending the ſame - - - - -	35,000
4. To a contingent fund, reſerved for incidental and unforeſeen expences -	10,000
	L. 80,000

III.

III. *Ultimate Return.*

1. Sale of ſtock, crop, and implements on the Experimental Farms, at the concluſion of 21, or of 30 years, or any other period that may be fixed on by the Society * - -	L. 35,000
2. Value of 5000 acres of land, the buildings erected thereon, and of 1,250,000 larches, fir, and other trees, at the concluſion of 30 years	218,000
3. Principal of the contingent fund, on the ſuppoſition that the intereſt will defray all expences of management, &c. - -	10,000
Total -	L. 263,000

which is about thrice the original capital. According to the calculations of ſome experienced nurſerymen, the return will be ſtill greater, and will exceed the produce of the capital laid out, at compound intereſt, at 5 per cent. Without pretending to aſcertain what muſt depend upon the value of timber, and a variety of other circumſtances at the moment, it may be ſufficient to remark, that the propoſed inſtitution muſt not only be productive of infinite public benefit, but muſt ultimately be a concern ſufficiently profitable, to entitle it to the cordial ſupport of thoſe who are friends to public improvement.

In addition to the ultimate return, the ſubſcribers will, in the *interim*, enjoy the following advantages, namely:

1. The advantage of having an account of the proceedings of the Society annually tranſmitted to them;

2. The privilege of viſiting the Experimental Farms, either in their own neighbourhood, or wherever they are eſtabliſhed by the Society;

3. The right of nominating perſons, to be inſtructed at the different agricultural academies propoſed to be erected at each Experimental Farm; and,

4. A diviſion of the annual profit that may ariſe from the Experimental Farms.

It is alſo intended to keep up ſuch a connexion with the Board of Agriculture, and the various ſocieties formed

* The Experimental Farms might be given up at the end of twenty-one years, and that part of the property divided. The plantations, probably, had better be retained for nine or ten years longer.

formed for agricultural purpoſes in the kingdom, as cannot fail to be attended with the moſt important advantages, both to the Society itſelf, and to the farming intereſt in general.

Conditions of the Subſcription.

1. That no ſubſcriber ſhall be compellable to pay his ſubſcription, or ſhall incur any expence whatever, unleſs the purpoſes of the inſtitution are actually carried into effect.

2. That the capital of 80,000l. ſhall not be increaſed, without the conſent of a majority of the ſubſcribers, and for the manifeſt intereſt of the ſubſcribers, and of the public.

3. That the Society ſhall be eſtabliſhed by charter, or by act of Parliament, or by deed enrolled, ſo as to prevent the poſſibility of any demand beyond the ſum ſubſcribed.

4. That the ſhares ſhall be transferable from the time that the Society is eſtabliſhed, and that the ſums ſubſcribed ſhall be payable by ſuch inſtalments as may be determined on at a general ſpecial meeting of the ſubſcribers, and iſſued ſolely under the authority of directors, or truſtees, appointed by the Society for that ſpecial purpoſe.

Farther particulars, regarding the proper inſtitution, will ſoon be publiſhed, and may be had of Meſſrs G. and W. Nicol, bookſellers to his Majeſty, Pall-Mall. And ſubſcriptions will be received by William Devaynes Eſq., treaſurer to the Society, and by all the principal Bankers in London.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

If you think the following obſervations on the management of *Hay* deſerving of notice, they may be inſerted in your next Number.

The treatment of *Hay* is a ſubject of high importance to the agricultural intereſt of Britain, not only as a valuable article of produce, but as conſtituting a bulky and eſſential part of the food of our domeſtic animals, upon which

which their health and uſefulneſs in a great meaſure depend.

Where ſuch a valuable intereſt is at ſtake, we might naturally expect to ſee experiments made, and a ſuitable degree of attention paid, to form a regular ſyſtem of management. It is much to be regreted, that in many parts of the iſland, no ſuch attention has been paid; and the treatment, eſpecially in many parts of North Britain, is ſlovenly in the extreme, and very ill calculated to ſecure and preſerve, in the higheſt degree of perfection, that flavour, and thoſe nouriſhing qualities, without which, neither hay, nor indeed any deſcription of herbage, can be valuable.

The firſt conſideration in the treatment of hay, is, the period at which it ſhould be cut, and the weather moſt proper for that operation. The time moſt proper for cutting the different kinds of grain, together with every ſtep of the after-management, are points well underſtood, and for the moſt part ſtrictly obſerved; every farmer being ſenſible that any neglect of, or deviation from theſe rules, will, by impairing the quality both of the grain and ſtraw, be productive of much trouble and loſs to himſelf. It is ſomewhat ſurpriſing, that the ſame kind of reaſoning ſhould not have been applied to the management of hay; as any diminution of its value, ariſing from improper treatment, muſt be equally prejudicial both to the grower and conſumer of that article, as to the grower and conſumer of grain.

The practice of many farmers in North Britain is, to allow their hay, not only to attain its ultimate growth, but even to make ſome progreſs towards decay, before it is cut: To obtain a bulky crop, being their chief object, every other conſideration is diſregarded; and neither the period of growth at which the cutting ought to commence, the weather moſt proper for that operation, nor indeed any ſtep of the after-management, are regulated by firſt rules. In place of cutting the crop during dry weather, and when it is free from every other but its own natural moiſture, it is very often cut in a wet ſtate, and on that account muſt remain in the ſwath a conſiderable time before it is fit for being put into cocks, during which it requires to be frequently turned and expoſed to the ſun and atmoſphere, for the purpoſe of

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drying it: In that way, a conſiderable proportion of its natural juices are diſſipated; and by the time it is dry enough for putting into the ſtack, it has loſt not only its flavour, but a great part of its moſt valuable properties; an evil that is farther increaſed, if much rain happen to fall either immediately after the cutting, or at any period before it is put into cocks: In that caſe, a ſtill greater loſs of its nouriſhing properties, and a conſequent diminution of its value, muſt happen.

The conſequences of this management, are felt in a variety of ſhapes, in every diſtrict where it prevails. In the lower diſtricts, the miſchief is comparatively ſmall, owing to the mildneſs of the Winters, the great quantity of rich foggage every where to be met with, and the abundance of corn ſtraw, and other wholeſome articles of food, with which theſe parts abound. In the hilly and upland diſtricts, however, the caſe is very different; and the loſs ariſing from the neglect and miſmanagement of their hay is great, almoſt beyond calculation. In theſe elevated regions, the Winters are, for the moſt part, of uncommon length and ſeverity; little ſtraw is produced; ſown graſſes, turnips, and potatoes, are equally ſcarce: In that way, the chief dependence of the farmer, for Winter food to his ſtock, falls upon the hay, which, when the quality is bad, and other articles ſcarce, induces debility and diſeaſe to ſuch a degree, that a great part of the ſtock either die, or are reduced to a ſtate of extreme weakneſs during the Winter; and when the Spring arrives, the green food has ſuch an effect upon the bowels of thoſe who have ſurvived, that many of them die alſo.

The greateſt part of the hay grown in theſe parts, is the produce of the wet ſwampy grounds, and the plants, of which it conſiſts, are of a nature that requires much judgement and attention to cure, in ſuch a manner, as to unite every advantage that might be expected from their uſe. When cut at a certain period of their growth, there is perhaps no ſpecies of herbage ſweeter, or more tender, or that contains more nouriſhing juices, or is more palatable to the animals fed with it, than meadow hay. It has already been obſerved, that, under the preſent ſyſtem of management, the period moſt proper for cutting hay, is leſs an object of attention than it ought to be. Experience proves, that the greateſt perfection of the herbage is met with, either immediately before it

it comes into flower, or as ſoon as the firſt flowers blow: At that period, it is in no ſhape exhauſted, either by blowing a multitude of flowers, or forming ſeeds, and contains all the uſeful qualities of which its nature is capable: After that period, it daily diminiſhes in value, becomes tough, ſapleſs, and unpalatable, and is not chewed without conſiderable difficulty. This rule applies to every ſpecies of herbage that is meant to be dried for Winter food; but to coarſe hay, the produce of wet or marſhy grounds, it is ſtrongly applicable; for, as we have already obſerved, moſt of the plants which grow in theſe ſituations, when they are in full vigour, are as tender, and contain perhaps as great a proportion of nouriſhing juices, as any other deſcription of hay; and, when cut at that ſtage, and properly managed afterwards, form a valuable article of food both for ſheep and cattle; but when the cutting is delayed, as indeed it very often is, till an advanced period of the ſeaſon, when the plants have not only reached their ultimate growth, but begun to decay, this deſcription of herbage becomes at once the coarſeſt and leaſt nouriſhing of all food.

This opinion does not proceed upon theory, but upon the ſolid ground of experiments carefully made upon many different kinds of herbage, at different periods of their growth, the reſult of which eſtabliſhes a fact that cannot be too generally known, viz. that plants of all ſorts, if they are cut when in full vigour, and afterwards carefully dried, without any waſte of their natural juices, either by bleaching with rain, or exhalation, contain, weight for weight, a quantity of nouriſhing matter nearly double what they do, when allowed to attain their full growth, and make ſome progreſs towards decay.

Hay of all kinds ſhould certainly be cut at the period we have mentioned, and, if poſſible, during dry weather; and, in place of being ſuffered to remain in the ſwath for days, as is commonly done, women with forks or rakes ſhould follow the cutters, and ſpread it in ſuch a manner as to allow the ſun and air free acceſs to the whole. If this operation is properly performed, and the weather favourable, the hay that was cut in the morning will be ready to be put into ſmall cocks by mid-day, where it may remain for two or three days; at the end of which, if the weather is dry, they may be thrown down early in the morning, and, after being expoſed

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to the ſun and atmoſphere for a few hours, put up into ricks of at leaſt forty or fifty ſtones each, where it may remain with perfect ſafety, till it is convenient to ſtack it. By ſuch treatment, every valuable quality is preſerved, the hay is of a fine green colour, and poſſeſſes ſo agreeable a flavour, that the animals eat it with the greateſt reliſh. Before ſtacking, ſome attention will be neceſſary, to render the whole as uniformly dry as poſſible, eſpecially if much rain has fallen, and the wind continued for any conſiderable time in one quarter after the hay has been put into ricks; when that is the caſe, one ſide will be found damp, while that which is expoſed to the wind is perfectly dry; the remedy conſiſts in turning the ricks round, which is done with great eaſe, by placing ſix or eight people, at equal diſtances, round the rick, with directions to thruſt their hands as far as they can under the bottom, at the ſame time graſping a handful of the hay: When the whole are ready, let them lift at once, and move round in the direction intended, till the damp ſide is oppoſed to the wind: In that way, ricks of fifty or ſixty ſtones may be turned with eaſe and expedition, and the whole rendered uniformly dry in a ſhort time.

It has been contended by many, that there is no great neceſſity for being ſo ſolicitous to have hay thoroughly dry before it is put into the ſtack, as it will keep perfectly well even with a conſiderable proportion of moiſture; and, ſhould any apprehenſion be entertained to the contrary, all danger will be prevented, by mixing it with ſalt; a practice ſtrenuouſly recommended by many intelligent writers.

Trials carefully made, and upon a ſcale ſo extenſive as to occaſion very conſiderable loſs to thoſe concerned, prove, beyond a doubt, that the addition of ſalt to damp hay is no preſervative againſt its heating; on the contrary, if moiſt weather follow immediately after it is put into the ſtack, the addition of ſalt, in place of being uſeful, will prove hurtful; it being a well eſtabliſhed fact, that ſalt, and every thing impregnated therewith, greedily attracts the moiſture of the atmoſphere, and occaſions a degree of dampneſs that would not otherwiſe have taken place. The experience of perſons who build houſes with ſtones taken from the bed of the ſea, is an undeniable proof of this; as the walls of ſuch buildings are always damp and uncomfortable, even if

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they ſhould ſtand for centuries, have we any reaſon to ſuppoſe that the caſe will be different when ſalt is mixed with hay? Either in a damp or dry ſtate, if it is put into the ſtack damp, the ſalt will very effectually prevent its farther progreſs in drying, with this diſagreeable addition, that if wet weather follow, the ſalt, by attracting an additional quantity of moiſture, will increaſe the evil.

The caſe is not materially different, when ſalt is mixed with even the drieſt hay, eſpecially in ſituations where the climate is moiſt, and the winters long; for, if the quantity of ſalt employed is conſiderable, the continual attraction from the atmoſphere during the Winter months, if it does not deſtroy it entirely, will at leaſt have the effect of rendering it muſty and unpalatable.

But though we thus diſapprove the practice of ſalting hay when it is put into the ſtack, whether in a moiſt or dry ſtate, there is every reaſon to believe, that it will be highly ſalutary and uſeful, if applied with judgment at a ſubſequent period. The beneficial effects of meadows or marſhes that have been overflowed with ſalt water, upon the health of ſheep and cattle, and the high reliſh they have for ſuch paſtures, are well known; the preference given by the animals is ſtrong and decided: Is there any reaſon to ſuppoſe that an equal preference would not be given to hay tinged with ſalt?

In bad ſeaſons, when hay has been much injured by the weather, it is not only taſteleſs, but diſagreeable to the animals in the Spring, who eat it only from neceſſity. When that is the caſe, it becomes an object to mix with it any article that can remedy theſe defects; for that purpoſe, nothing is better calculated than ſalt, which, along with its giving the hay an agreeable taſte, has a medicinal effect upon the bowels of the animals; a matter at preſent too much neglected, while they are feeding upon dry food. The moſt proper time for applying the ſalt, ſeems to be a day or two before the hay is uſed. At that time, a quantity ſufficient for two days conſumption ſhould be taken from the ſtack, and laid either in a ſhed or barn; a thin ſtratum ſhould firſt be ſpread upon the floor, and lightly ſprinkled with water from the roſe of a watering-pan; a ſmall quantity of ſalt ſhould then be equally ſcattered upon it; after which another ſtratum of hay ſhould be added; and the ſame operations of

watering and ſalting repeated, till the whole quantity is gone through; it ſhould then be well turned and mixed with a fork, and allowed to remain in a heap for one night; after which, it will be fit for uſe.

It is neceſſary to obſerve, that the quantity of water applied ſhould never exceed what is neceſſary to damp the hay; and the proportion of ſalt ſhould be confined to what will give it an agreeable flavour: a ſuperabundance of either, in place of being uſeful, defeats the purpoſe for which they are applied. If there is too much water, it runs off, carrying the ſalt along with it; if too much ſalt, it renders the hay bitter. The ſalt made uſe of ſhould be of the ſmalleſt kind, for the purpoſe of ſprinkling it equally; and every poſſible means ſhould be taken to prevent one part of the hay from getting more than another.

It is worthy of notice, that though the ſalting of hay a day or two before it is uſed, is in general attended with advantages, we beg leave to be underſtood as meaning only the coarſeſt kinds, or ſuch as may have been injured by the weather; for, in every inſtance where it has been cut at the proper ſeaſon, and well managed afterwards, the taſte and flavour will be ſuch as to recommend it to the animals, without any addition whatever; but, in unfavourable years, when the quality is much impaired by the weather, eſpecially if the hay is coarſe, and treated in the manner commonly practiſed in the hilly and upland parts of the country, the operation of watering, with the addition of ſalt, will, by ſoftening and giving it an agreeable taſte, induce the animals to eat it with advantage, in many inſtances when it would otherwiſe be rejected. It is perhaps in ſuch caſes only, that ſalt can be uſeful, unleſs it be meant as a medicine; and it is very apparent, that the hint of uſing ſalt at all, originated in the preference given to ſalt marſhes over other paſtures, by both ſheep and cattle.

In treating of an article of ſuch value and importance as hay, it is worth while to inquire, what are the moſt advantageous and economical modes of uſing it.

Every good farmer is now ſenſible, that when any conſiderable quantity either of hay or other fodder is given to horſes, ſheep, or cattle, at once, the effect of their breath blowing upon it, joined to other cauſes, renders it ſo diſagreeable, that they ſoon loathe and refuſe to eat it;

it; in that way a conſiderable part of it is loſt. On the contrary, when it is given frequently, and in ſmall quantity, it contracts no diſagreeable ſmell, and the animals eat up the whole. Farmers of a certain deſcription will no doubt object to this mode of feeding, on account of the trouble with which it is attended. With them, it is a maxim, that if the animals are fed once, or at moſt twice, in the twenty-four hours, it is ſufficient; and that if they are hungry, they run no riſk of ſtarving, while they have food ſo near them. They do not, however, reflect upon the injury which the fodder thus uſed ſuſtains, by being breathed and trod upon, and impregnated with dung and urine. Let ſuch men conſider, for a moment, how they would reliſh the remains of their dinner ſerved up for ſupper, after being kept within a yard of their noſe during the interval, upon the ſame plates, with the ſame knives and forks, without any waſhing or cleaning. There are few people, indeed, who would not nauſeate and reject ſuch a meal.

The caſe cannot be very different with any of our domeſtic animals, when they have a quantity of hay or other fodder given them, ſufficient for a whole day's conſumption; having it conſtantly in their ſight, and being blown and trod upon, impregnated with urine and otherwiſe injured, it becomes loathſome beyond deſcription; and, in place of being eat up, which it always is when ſmall quantities are given at a time, and frequently repeated, a great part is rejected. It ought therefore to be a rule with all farmers, to give little at a time, and repeat it frequently, always taking care that what was laſt given ſhall be conſumed, before they receive an additional ſupply. By ſuch management, no part of the fodder will be loſt, and the animals will at the ſame time derive more benefit from the uſe of it.

Another economical practice remains to be mentioned, namely, the mixing of ſtraw with hay. From many trials in different parts of the country, it appears, that where good ſtraw can be had in plenty, it may be mixed with hay to great advantage. Some farmers are in the habit of mixing ſtraw with cutting graſs, the benefit of which will be afterwards noticed. When ſtraw is mixed with hay, the proceſs of curing may be accelerated, and the quality of the hay at the ſame time improved,

proved, by leading out the ſtraw to the field, mixing it intimately with the hay immediately after it is cut, and putting the whole into ſmall hand-cocks, as ſoon as it is mixed. It is well known, that when moiſt and dry bodies are brought into contact, the former begin to give out a part of their moiſture, which is as greedily abſorbed by the latter, and continues to be ſo till a balance is eſtabliſhed between them; or, in other words, till both contain an equal proportion of humidity. This is preciſely what happens when dry ſtraw is mixed with green herbage. Immediately after they are laid together, the ſtraw begins to abſorb a part of the juices, and continues to do ſo as long as the graſs will part with any. In that way, every part of the natural juices is effectually preſerved; and the ſtraw, from the abſorption of what would otherwiſe have been either evaporated by the ſun, or waſhed away by the rain, is rendered nearly equal in value to the hay. Where this practice is followed, and due pains taken in the mixing, very little expoſure to the ſun or atmoſphere is neceſſary, and the hay will be fit for putting into the ſtack in half the time that is required where no ſtraw is uſed.

In place of leading out the ſtraw to the field, it is cuſtomary, in ſome parts of the country, to mix it with the hay in the ſtack, by laying alternate ſtratums of each, a practice that anſwers pretty well, but is much inferior to that above recommended. It may, however, be very uſeful in unfavourable ſeaſons, and be the means of preſerving hay that could not be cured otherwiſe.

When ſtraw is mixed with graſs for preſent uſe, a quantity ſufficient for ſeveral days conſumption ſhould be cut at once, and, after mixing, laid up in pretty large heaps, and allowed to remain in that ſtate for a couple of days at leaſt; at the end of which, the ſtraw will be found much ſoftened and impregnated with the juices of the graſs. When a fair trial is given to this practice, ſeveral advantages will be found to ariſe from it: The *firſt* is, the converſion of a conſiderable quantity of ſtraw, which would otherwiſe have been of little value, into a wholeſome and nouriſhing article of food; the *ſecond*, that graſs, ſo mixed, has not that purgative quality it is known to poſſeſs in its ſimple ſtate, and ſeems to keep the bowels in a medium ſtate, preventing alike the

the extremes of ſcouring and coſtiveneſs, circumſtances of much importance to the health and ſtrength of the animals.

It has been recommended, and to a certain extent practiſed by ſome farmers, to mix old and new hay. Upon this point, we have ſimply to obſerve, that if old hay has been well got, and properly ſecured in the ſtack, it will be found for many purpoſes ſuperior to the new; it certainly contains a firmer and more concentrated nouriſhment than new hay can poſſibly do; and for all animals that are employed in conſtant and ſevere exertion, it is infinitely preferable. There is a period, however, beyond which, even the beſt old hay will, by being exceſſively dried, begin to be impaired in its quality, and be eaten with much leſs reliſh. In ſuch caſes, a mixture of new hay will be uſeful; as the old, by the abſorption of the new juices, will recover a part of the moiſture and flavour it had loſt by long keeping. The ſame thing will happen, if the hay of the former year has been of an inferior quality, owing either to its having been allowed to ſtand too long before cutting, or to its being bleached with rain after it is cut. In either of theſe caſes, the defect will be in ſome degree repaired, by mixing it with new juicy well-flavoured herbage.

A. Z.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

IT will be obliging, that you give a place, in your next Number, to the following queries, reſpecting the ſize of the meaſures of capacity uſed in England.—I am, &c.

A Merchant.

QUERY I.

Whether the returns made from the London market, of the price of grain, are aſcertained by the quarter, raiſed from the corn gallon kept in Guildhall, which contains as follows:

Gallon	272¼	ſolid inches;
Buſhel	2,178	
Quarter	17,424	

or from the legal Wincheſter buſhel, according to the ſtandard in his Majeſty's Exchequer, by which the duties on malt, &c. are charged, which is as follows:

Gallon	268.8	ſolid inches?
Buſhel	2,150.4	
Quarter	17,203.30	

QUERY II.

Is not the former quarter conſidered as the ſtandard for meaſuring corn, ſalt, coals, and other dry goods in England, under the title of Wincheſter meaſure?

PART

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

General View of the Agriculture in the County of Perth, with Obſervations on the means of its Improvement. By JAMES ROBERTSON, *D. D. Miniſter at Callander, in the County of Perth. Drawn up for the Conſideration of the Board of Agriculture and Internal Improvement.* 575 *pages, 8vo. Printed at* Perth, *and ſold by* Morriſon *and others*—1799.

AGRICULTURE was long neglected by the inhabitants of the Northern parts of Scotland; and it is only of late that this uſeful ſcience can be conſidered to have been practiſed among them upon any thing like rational principles. It gives us great ſatisfaction to learn, that rural knowledge is now extenſively diſſeminated over the moſt diſtant diſtricts, and that the northern diviſion of the iſland promiſes, at no very diſtant period, to rival our ſouthern neighbours in practical huſbandry, which has long been their favourite profeſſion.

Many cauſes might be aſſigned for the ſupineneſs and inactivity of former times. The Feudal Syſtem, which was not abrogated in Scotland till 1748, enervated the faculties of the farmer, and kept him in a ſtate of the moſt abject dependence; while a general want of capital retarded every ſpecies of improvement whatever. Since the period above mentioned, theſe difficulties have gradually vaniſhed; the condition of the tenantry has been meliorated, and a ſpirit of enterpriſe excited amongſt that body of men, which has contributed not only to enlighten their minds, but likewiſe to throw a degree of capital into their hands neceſſary for promoting a flouriſhing agriculture.

The intelligent work now before us, affords the moſt ſatisfactory proof that the circumſtances which long obſtructed improvement are now generally removed, and that every branch of rural ſcience is making a rapid progreſs in the centre of North Britain, where hitherto it was imperfectly underſtood. From the indefatigable and judicious exertions of the Reverend Gentleman, who, under the authority of the Board of Agriculture, has drawn up this work, the ſtate of huſbandry in Perthſhire is clearly elucidated, and the moſt intereſting information communicated.

In reviewing ſuch a meritorious publication, wherein we find little to blame, and a great deal to praiſe, want of room prevents us from analyſing its various parts with that minute attention which their value deſerves. We will therefore try to ſeize upon ſome of its moſt prominent parts, and endeavour to convey to our readers a ſlight idea of the maſterly manner in which the huſbandry of this extenſive and complicated diſtrict is detailed.

Paſſing over the introduction and preliminary obſervations, wherein much good ſenſe and knowledge of mankind are diſplayed, we notice, in the firſt chapter, that the county of Perth contains 5000 ſquare miles, or 3,200,000 Scots ſtatute acres; in which there is certainly ſome miſtake, as that number of miles ought only to return 2,500,000 acres. The natural diviſions are ſaid to be Highland and Lowland; eighteen pariſhes being ſituated in the firſt, and fifty-nine pariſhes in the ſecond diviſion. The climate, notwithſtanding its numerous varieties, cannot, upon the whole, be conſidered as unfavourable to the general purpoſes of huſbandry; and as for the ſoil, ſo much information is communicated reſpecting what has been called "the capital ſtock of the country," that the ſection well deſerves the attentive peruſal of thoſe intereſted in its proſperity.

Limeſtone appears to be plentiful in the Highland diſtrict, though, from the want of coal, the inhabitants cannot partake of the full advantages accompanying the application of this beneficial article. This ſuggeſted to the fertile genius of Lord Kames, a ſcheme for having the ſtone reduced to powder, to compenſate for the want of materials for accompliſhing calcination; but unfortunately the machine erected by the Commiſſioners of the

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Forfeited Eſtates, upon his Lordſhip's ſuggeſtion, was ſwept away by a flood, before the benefits of the proceſs were ſufficiently aſcertained. It certainly would be worth while for the proprietors, locally deprived of the aſſiſtance of lime, to erect another, or more machines, as few doubts can be entertained reſpecting their utility. Unburnt limeſtone, when reduced to powder, though it has not the ſame activity as that which has undergone the action of the fire, is a valuable article, and, in particular ſituations, even more uſeful than quicklime.

The ſecond chapter contains the *State of Property*, wherein juſtice is done to the characters of the Noblemen and Gentlemen of Perthſhire, who "are regarded as the fathers and friends of every perſon within their domains." The following paſſage deſerves the greateſt praiſe, being dictated by ſtrong good ſenſe, and founded upon juſt views of human nature:

"While the ſupercilious landlord, who, with an air of diſdain, keeps his tenants at a diſtance, or does not know them at all, ſcarcely receives the cold ſalute and ceremonious bow which is due to rank; he who bends a little, and exchanges a few kind expreſſions, receives the reſpectful ſalutation of eſteem, accompanied with the affectionate language of gratitude. The moſt beloved, and the moſt ſucceſsful generals, were thoſe who knew their ſoldiers perſonally. No man is leſs dignified for being beloved; and it leſſens no man's conſequence in the world, to have the confidence of thoſe around him. Hence, the generality of proprietors, who are reſident on their eſtates, lead their tenants by the hand, in the road of improvement, and of wealth; and have found the true ſecret of promoting their own intereſt, while they promote the intereſt of their people."

The *Size of Farms*, and character of the poſſeſſors, are well deſcribed. We obſerve two notes upon this ſection by a Mr Samuel Fieldhouſe, Cavendiſh Street, London, and Mr Bailey at Chillingham. The firſt aſſerts, that if landlords had confined farms to the ſize of fifty acres, the increaſe of their wealth (rent) would have been much greater than it now is; while the other, with greater reaſon on his ſide, maintains, that upon a large farm, "more hands are employed, more produce raiſed," and conſequently, that ſuch are more beneficial to the landlord, and

to the public. Though it is evident, that many circumſtances muſt be taken into conſideration, before the proper ſize of a farm can be properly aſcertained; and that, at the beſt, it is but an abſtract queſtion; yet, in a general point of view, the aſſertion made by Mr Fieldhouſe will be found contradicted by common practice. A farm of fifty acres Engliſh meaſure, which muſt be what is here meant, cannot, in ordinary years, return a produce exceeding 250l. in value; of which, the rent and public burdens will at leaſt require 75l. One half of the remainder will be conſumed upon the premiſes, while a ſum, not exceeding 85l., is only left for paying ſervants wages, defraying intereſt of capital ſtock, ſupporting tear and wear, purchaſing graſs ſeeds, and anſwering that complicated account called incidental expences. The fact is, that, in the preſent ſtate of things, 50 acres of land cannot be managed with the leaſt degree of advantage, unleſs the tenant work the farm himſelf; and, in ſuch a caſe, from inſtances which have come under our obſervation, his condition will not be ſuperior to that of a hired ſervant, while his toil and trouble will be far greater. The matter will not be mended, by ſaying, that the labour may be performed by the farmer's family; for they will be found ſtill more expenſive than hired ſervants.

Where facts can be adduced, it is unneceſſary to have recourſe to argument; in the preſent caſe, the former decidedly contradicts the unqualified aſſertion of Mr Fieldhouſe. If any perſon, who has examined the huſbandry of Britain, is called in evidence, his teſtimony will prove, that thoſe parts of the kingdom, where extenſive farms prevail, are uniformly beſt cultivated, and conſequently capable of making the greateſt returns to the proprietors: inſtance, Northumberland, Norfolk, Suffolk, Eſſex, and Kent, where the farms in general are of conſiderable extent; they are cultivated in a ſuperior manner to the midland and weſtern counties, where the ſize of farms is much contracted. We might, in fact, as well ſuppoſe, that a petty weaver carried on his trade with equal ſucceſs as a large manufacturer, who was provided with hands for every department of buſineſs, as think that a fifty acre farm could be managed with greater advantage than one of larger extent, where the huſbandry practiſed, affords conſtant employment to all concerned, and gives

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a diviſion of labour according to the reſpective talents of each individual.

We notice Mr Bailey's note repeated, p. 387, and an anſwer ſubjoined by Dr Robertſon, which does not favour of his uſual ingenuity. Mr Bailey does not enter upon the queſtion, whether an acre of land, employed in producing beef and mutton, will feed as many mouths as the ſame quantity employed in raiſing grain? which we certainly think it will not: He only means, that a certain quantity of land muſt be devoted to grazing, and that it is immaterial, whether the farm be large or ſmall, as butcher meat muſt be had, in either caſe, proportioned to the demand. Dr Robertſon's anſwer, however, proceeds upon the ſuppoſition, that a large farm muſt be in graſs, otherwiſe his argument is untenible.

Dr Robertſon is a friend to the granting of *leaſes*, without which, he, with great juſtice, thinks it vain to expect that the huſbandry of any country will be improved. His arguments under this ſection are ſtrong, deciſive, and incontrovertible. We are not however certain, if he is altogether ſo *orthodox*, reſpecting the nature of the clauſes, or covenants, which ſhould bind the farmer; but we muſt acknowledge, that he offers weighty reaſons in ſupport of his opinion. What he ſays, p. 433, &c. upon this ſubject, may be read with advantage, both by proprietors and farmers.

Under the article "Expence and Profit," we are preſented with a detailed account of the returns from a farm of 74 acres in the Carſe of Gowrie, which, if correct, would be a better argument in favour of ſmall farms, than any we have heard inſtanced. The rent is ſtated to be 3l. per acre, and yet a profit of 310l. 6s. 2d per annum appears, which is very near four guineas per acre. We are under the neceſſity of offering a few remarks on the different articles, being convinced that ſuch details are very injurious to the tenantry of the kingdom, not becauſe they diſcloſe the *real* profits of huſbandry, but becauſe they preſent falſe and miſtaken views of the buſineſs, and contribute to impreſs ſuperficial inquirers with a belief, that farming is a much better trade than it really is. Indeed, if every perſon made ſuch handſome profits as the owner, or tenant, of the

the farm in queſtion, (who is held up as a model of correctneſs), it would be the beſt trade in the kingdom.

1ſt, The ſeed-wheat is charged 5s. 6d. per boll leſs than the produce ſold. This might actually happen; but the caſual riſe of markets is not a fair ſtatement of rural profits; the reverſe might happen in another year. *2dly*, The ſame obſervation applies to the barley crop. *3dly*, The whole expence is charged only at the rate of 40s. per acre; whereas the charge for ploughing, or what is included under the expence of horſes and ploughmen, would amount to that ſum, independent of incidentals, harveſt-work, thraſhing, &c. *4thly*, The different crops are all excellent, and much greater than any average will warrant, while no allowance or deduction is made for light grain. *5thly*, The prices are much higher than what the fiars of Perthſhire will allow; their average for wheat, from 1780 to 1796, being about 22s. 3d., which includes one year, viz. 1795, when grain was extraordinary high; whereas 27s. 6d. is ſtated for nearly the whole of the crop. It is needleſs to examine this account of expence and profit further, as we believe the dulleſt of our readers will be ſatisfied that it is very erroneous. Indeed, when the rent of a farm is 3l. per acre, it is a handſome return if 20s. per acre of profit is made, after intereſt of ſtock, tear and wear, and all other expences, are paid.

The Carſe of Gowrie is perhaps as regularly managed as any diſtrict of ſimilar extent in Great Britain; and we cheerfully beſtow every manner of praiſe upon the rational and judicious huſbandry there practiſed. Mr Arthur Young, in his Agricultural works, often feelingly laments the general bad cultivation of clay ſoils in England: but were he to viſit this valuable tract of land, he certainly would rejoice that there are ſome farmers in the kingdom who underſtand the management of clay ſoils. A better rotation than *ſixes* cannot be deviſed for ſuch a ſoil, provided the fallow break is ſufficiently wrought and manured, which, we believe, is ſeldom neglected.

Chapter 7th contains very judicious remarks upon that neceſſary ſtep to improved huſbandry, viz. *levelling of ridges*. Indeed, the different ſections of this chapter incline us to believe, that Dr R. is intimately acquainted with the management of arable land; for tillage, fallow-

ing,

ing, and the rotation of crops, could not have been more judiciouſly explained by the moſt diſtinguiſhed agriculturiſt. The information communicated reſpecting the different proceſſes of rural economy, from the ploughing of the ground, to the reaping and ingathering of the crop, are more amply detailed than in any other ſurvey that has come under our conſideration. This chapter may be read with pleaſure by the beſt, and with profit by the unexperienced huſbandman.

In the ſection concerning *hay harveſt*, it is ſaid, p. 218, that, in 1786, Mr Paterſon of Caſtle-Huntly "had 6000 ſtones of hay from a field of 13 acres," or nearly 450 ſtones per acre, which is 130 ſtones more than the greateſt crop ever known in our practice. We remember of a certain perſon, who once vaunted that his hay crop turned out 500 ſtones per acre: "Pray," ſaid a ſhrewd ſagacious neighbour, "did you meaſure the "ground?" "No, I only computed it." "Did you "weigh the hay?" "No, I counted the cart loads, "and eſtimated the produce." So much for a great crop of hay! We acknowledge, at the ſame time, that we have ſeen heavier crops of clover-graſs in the Carſe of Gowrie, than in any other diſtrict of the kingdom; and are far from calling in queſtion the veracity of the account here given.

The chapter upon *Woods and Plantations*, conſtitutes an important department of the work, and deſerves the attentive peruſal of the landed proprietors, who are chiefly intereſted in this branch of rural improvement. Dr R. ſays, "there are more oak woods, and of great-"er value, in Perthſhire, than in all the reſt of Scot-"land:" but it appears, that a great deal of mooriſh lands might be advantageouſly employed in growing Scots firs and larches, which is corroborated by ſeveral judicious, and apparently accurate calculations.

The *Live Stock* of the county is amply deſcribed in the 13th chapter; and we give Dr R. great credit for the judicious remarks which he makes upon this ſubject. We decidedly coincide with him in opinion, that "ſheep are the moſt profitable, the moſt uſeful, and "the moſt inoffenſive of all the browſing animals;" and "that, upon any given extent of paſture, their re-"turns are nearly one-third more than that of any other "ſtock." We obſerve a degree of apprehenſion, however, that the ſheep ſyſtem may be carried too far;

far; but this, under the increaſe of conſumption, gives no real cauſe of alarm. While Dr Robertſon is rather partial to the raiſing of black cattle, he gives, in our opinion, the beſt of all reaſons why ſheep ought to be kept. To do the ſubject juſtice, we ſhall extract two paragraphs from pages 310 and 311, which meet with our unqualified approbation.

"This rage for a ſheep ſtock is ſtill going on; and the cattle muſt neceſſarily travel down to market, whoſe place is annually occupied by ſheep. If we ſuppoſe ſixty or one hundred farms to be every year changed to the ſheep ſyſtem, the cattle from theſe will help to ſupport the numbers at market. This propenſity to ſtock with ſheep muſt be gratified; but when fully gratified, it muſt have an end; for beef muſt be had at any price; and when the time comes, that the tables are to be turned againſt the ſheep ſyſtem, in favour of black cattle, they who diſcern the approaching change, and are prepared for it by breeding cows, will reap the fruits of their diſcernment.

"In accounting for the numbers of black cattle at preſent brought to ſale, we ought by no means to forget the improvement occaſioned by the ſheep themſelves. They enrich the quality, and enlarge the quantity of graſs within their walk, more than any other ſpecies of animals: they never deteriorate the ſoil; they render it always more and more productive; and wherever their numbers are increaſed upon a certain extent of land, they help to ſupport the increaſe of their own numbers, by producing an increaſe of food. The ground is not only made green, and the heath extirpated by the enriching quality of their manure, but the fineſt graſſes ſpring up ſpontaneouſly, where it had formerly been ſcanty and coarſe; and when this powerful top-dreſſing of our whole hills with ſheep dung and urine has been completed, there is little doubt, that, in a few generations, the Grampians will be as verdant as the Ochils; and that the Ochils had once as forbidding an aſpect as the Grampians."

We defy any perſon to diſplay the benefit of the ſheep-huſbandry, in ſtronger terms than here expreſſed. With the diſeaſes of ſheep, the Doctor appears intimately acquainted.

We obſerve the ſame reaſons of complaint againſt the adminiſtration of the ſtatute work, as have occurred to perſons in other diſtricts; nor is it ſurpriſing, that the evils neceſſarily attendant upon a defective ſyſtem, ſhould have

have been perceived by every man who has thought upon the ſubject. "The thing (the law) itſelf," as the Doctor wiſely remarks, "is an error;" and "attempts to ingraft partial remedies upon what is radically wrong, generally increaſe the evil they are meant to correct."

The obſtacles to improvement are ſtated to be, 1*ſt*, *Townſhips;* by which is meant a number of plough-gates in one village, or ſeveral tenants about one plough. 2*dly*, *Runrig*, or a mixture of property. 3*dly*, *Uncertain boundaries of eſtates.* 4*thly*, *Servitudes;* the evils of which are deſcribed in animated language. 5*thly*, *Thirlage.* 6*thly*, *Shortneſs of leaſes.* 7*thly*, *Diſtance from manure.* And, 8*thly*, *Commons;* which undoubtedly may be removed by the exertions of individual proprietors. We are ſorry that the limits which we can aſſign to this article, prevents us from ſaying more upon thoſe obſtructions to improvements, than ſimply mentioning them.

The concluſion contains an animated picture of the advantages attending agriculture; upon which, moſt aſſuredly, men of all ranks, from the higheſt to the loweſt, depend more than upon any other of the arts. The neceſſity of perſonal experience to make a good farmer, is likewiſe ſhown in a ſatisfactory manner. A quotation from Cicero is given, which is very applicable to the ſubject:

"Of all the ſources of wealth or pleaſure, none is "more ſure than agriculture, none more productive, "none more delightful, none more worthy of man, none "more becoming a gentleman."

An Appendix is given, containing, among other intereſting papers, an accurate topographical deſcription of the diſtrict ſurveyed. Such a valuable addition to the plan of the Board, muſt be highly advantageous to perſons unacquainted with the county of Perth, though perhaps it would have appeared with greater propriety in the body of the work.

In a word, the Survey of Perthſhire deſerves to be claſſed amongſt the moſt reſpectable of the works offered to the public, through the medium of the Agricultural Board. The author, in every page, diſplays an intimate knowledge of the human character, and a marked deſire to promote the real welfare of his country. He is eminently verſant in the ſciences of rural and political economy, and, if we are not miſtaken,

poſſeſſes

poſſeſſes a thorough knowledge of the ſeveral branches of practical huſbandry. None of theſe works have yielded us greater ſatisfaction; and few of them have ſhown ſuch inſtances, either of diligent reſearch, or accurate detail.

N.

General View of the Agriculture of the Weſt Riding of Yorkſhire. Surveyed by Meſſrs Rennie, Brown, and Shirreff, in 1793. *With obſervations on the means of its improvement, and additional information ſince received. Drawn up for the conſideration of the Board of Agriculture and Internal Improvement. By* ROBERT BROWN, *Farmer at Murkle, near Haddington, Scotland.* 8*vo*, 428 *pages.* Watſon, Edinburgh; Nicol, *&c.* London, 1799.

(BY A GENTLEMAN IN YORKSHIRE.)

IT muſt be confeſſed, that the preſent grievous ſcarcity of the neceſſaries of life, may appear, in the eyes of the common people, a bad comment on the labours of the Board of Agriculture, and all other public inſtitutions affecting theſe objects; but, alas! they poſſeſs no controul over phyſical cauſes, no means of ſupplying the want of ſunſhine, or of tempering the exceſs of cold and moiſture, by which, in ſpite of every endeavour of the moſt judicious, the varied products of the ſoil are liable to injury and diminution. Perhaps, we ſhall be under the neceſſity of concluding, that the Board of Agriculture has done what can be done in exiſting circumſtances: and much praiſe is due to its late able and indefatigable preſident, Sir John Sinclair, for the pains he has taken, in the acquiſition of a maſs of moſt uſeful information and inſtruction on the general rural economy of the iſland. This has clearly aſcertained what are the real obſtacles to more extenſive improvement; and it is now left to the Government, and to thoſe called the leading intereſts of the country, where alone the power reſides, to remove thoſe obſtacles as ſpeedily as poſſible. It is a moſt weighty reſponſibility, and

and they would do well to take it under their immediate and ſerious conſideration.

The ſubject of this general view, the Weſt Riding of Yorkſhire, is a diſtrict of very conſiderable importance. Though but a frithing, or third part of a county, it may vie with many of the moſt flouriſhing counties in the kingdom, in wealth and population, and in induſtry, rural and mechanical. Its ſoil, though various, is rendered generally productive; yet there is much room for improvement, the natural means of which it eminently poſſeſſes within its own limits; lime, &c. for manures; an agriculture tolerably enlightened and active; extenſive trade and manufactures; the powers of which, on the improvement of the ſoil, require nothing but the foſtering hand of legiſlative encouragement, for their complete developement, with effects almoſt incalculable. The abundant ſupply of coal, wood, and other materials, eſſential to the leading manufactures of this diſtrict, in wool and iron, added to all its other advantages, cannot fail to render it an object of ſurvey peculiarly intereſting; and the candid reader of the reviſed work, now publiſhed, will allow, with us, that ample juſtice has been done to it.

In the introduction, the editor ſays, "Under the authority of the Board, my friends Meſſrs Rennie and Shirreff, and I, ſurveyed the *Weſt Riding of Yorkſhire*; and, during our progreſs, ſcarce a difference of opinion occurred reſpecting the matters which underwent our examination. We remained about five weeks in the diſtrict; and, during that time, uſed every means in our power to gain an intimate knowledge of the different modes in which huſbandry was carried on, as well as the general and local impediments to its improvement."

Though inhabitants of a diſtant part of the country, and entire ſtrangers to the diſtrict in queſtion, before the preſent occaſion, the ſurveyors have performed their taſk with a degree of liberal impartiality; and, though practical adepts in agriculture themſelves, have evinced a diſpoſition ſo candid and unobtruſive, in their remarks on defects, and in their recommendations of better practice, that this work cannot fail to inſure the approbation of thoſe competent to judge, among all claſſes of the people of the Riding, into whoſe hands it may fall; and ſurely it behoves every one of common intelligence,

connected with the intereſts of this Riding, either by inhabitancy or property, to peruſe the work with that attention which the importance of it demands, and which all are perſuaded will not be found defective of thoſe circumſtances of amuſement and inſtruction, which conſtitute the pleaſure and advantage of reading in general.

We are informed by the editor, that this is rather to be conſidered as a reviſed ſurvey, or ſecond edition of the work, containing, with additional matter of his own, ſuch farther remarks as he deemed proper for ſelection, from the correſpondence and notes written by various individuals on the broad margin of the firſt quarto edition, a number of copies of which were previouſly circulated among the cultivators of the diſtrict for that purpoſe, in purſuance of the general plan of the Board of Agriculture. This was perhaps juſtly concluded by that Board, the beſt means of obtaining real and authentic information on the rural œconomy of every part of the iſland. We are further informed, that the editor has ventured to proceed, in the execution of his part of the plan, on principles different at leaſt from that recommended by that veteran Coloſſus of agricultural ſcience, the celebrated Arthur Young; yet the defence of his conduct, in that reſpect, is perfectly ſatisfactory.

A uſeful table of contents is prefixed, containing, in fact, a brief analyſis of the work, which is divided into eighteen chapters, with ſections; and a valuable appendix, of ſome length, concludes the whole. In chapters 1ſt and 2d, are given the geographical ſtate and circumſtances, tenures, &c. in a compendious way. The ſurface of the Riding contains 2450 ſquare miles, or 1,568,000 ſtatute acres; and is divided into 9 wapentakes, 175 pariſhes, containing 28 market towns, with a great number of populous villages. Chap. 3. preſents important practical matter to the agriculturiſt. The inconvenient ſituation of farm-houſes, crowded together in villages, is very properly the ſubject of animadverſion; an inconvenience reſulting from the feudal ſyſtem, and riveted by long habits, which could not now be broken through without ſome difficulty. A ſumptuous pile of farm-buildings, executed in a ſuperior ſtyle of convenience, by Lord Hawke, at Towton, are here noticed; but we cannot ſuppoſe that ſuch coſtly patterns can meet many imitators, though ſome parts of this may be

be well worth the attention of a farm-builder. On the proper ſituation and diſtribution of a farm-houſe and offices, ſeveral judicious obſervations are given.

The ſalutary practice in Scotland, of paying the married farm-ſervants partly in neceſſaries, inſtead of wholly in money, as in England, is recommended to the attention of the Weſt Riding farmers. In Scotland, they receive certain quantities of oats, barley, and peas, have a cow kept, and a piece of ground for raiſing potatoes and flax. This recommendation is very properly ſupported by the notes of correſpondents; as it has an undoubted tendency to preſerve the morals of the labourers, and to diffuſe the bleſſings of a comfortable ſubſiſtence among their families; objects moſt ſhamefully neglected in many parts of England.

In chap. 4th, the *Mode* of *Occupation* is conſidered; and the writer notices the general inadequacy in the ſize of farms in the diſtrict, to an improved ſyſtem of corn culture. It is true, that on a farm of leſs than 150 or 200 acres, the occupant feels himſelf ſhackled with a number of heavy horſes, without conſtant employment for them; but, if the working of oxen were reſorted to, the caſe might be very different; for, notwithſtanding the arguments of many practical men againſt the utility of draught oxen, it remains a fact, that they will perform as much work, if properly attended to, as the clumſy cart horſes uſually kept by the farmers of Yorkſhire, and many other parts of England. Whatever becomes of the queſtion of large or ſmall farms, ſmall graſs farms are much wanted almoſt every where; and it is remarkable, that graſs farms bring a much higher rent than arable ones.

The diſcouraging cuſtom of *tithes* in *kind*, is not forgotten; and ſome hints are given, of the neceſſity of its removal, before any great additional improvement can be attained to; but, on this ſubject, the hands of the ſurveyors have been in ſome degree tied up, by the injunctions of the Board of Agriculture. Such is the proſpect of good from that Inſtitution, that one of its primary mandates is, the prohibition of diſcuſſing an abuſe, or grievance, which has long been ſucking the heart's blood of Engliſh agriculture. The *poor's rates* are here conſidered, and perhaps juſtly, as inadequate to their profeſſed end. A

paragraph is quoted, as containing information on this ſubject, and that of the tithes, not generally known:

"Previous to the period when the Reformation took place in England, the poor were ſupported at the monaſteries, and other houſes of the irregular clergy; it being then underſtood, that this was one of the purpoſes for which tithes were paid to theſe houſes; and, after the ſuppreſſion of the monaſteries in 1543, great clamours enſued over the whole kingdom, in conſequence of this ſupport being withdrawn. The poor continued in a deplorable ſtate till the 43d year of Queen Elizabeth's reign, when the laws for regulating their ſupport were firſt enacted; and, whatever were the motives which operated on the minds of our Legiſlators to enact ſuch laws, experience has proved, that the ſalutary conſequences which they expected from them have been totally unfounded."

Leaſes are ſtrongly recommended: They are perhaps eſſential to real improvements, unleſs ſome other ſecurity could be deviſed for the encouragement of the ſpirited and well informed occupant. Of the effectual utility of this mode of letting land, the prodigious improvements made by the tenants on the Duke of Norfolk's eſtate, at, and in the vicinity of Sheffield, are adduced as inſtances in proof. Yet much may be ſaid on both ſides: Perhaps the land-owner is generally more a gainer by letting his property on leaſe, than he is aware of, every thing conſidered; and let the tenant be cautious how he takes a long leaſe, at a high rent, and ſubject to all increaſing taxes in "exiſting circumſtances." The remarks on covenants and reſtrictions in leaſes are liberal and enlightened; which having excited a diſcuſſion between the editor and a gentleman of the diſtrict, we may obſerve, that the arguments of the former have a decided ſuperiority.

In chap. 5th, the *uſual implements* are examined, and ſome improvements are, with great judgement, ſuggeſted in ploughs, carts, &c. Light carts, for one or two horſes, are recommended to attention, in lieu of the heavy lumbering tumbrils uſually drawn by three. The practice of yoking horſes for ploughing in pairs, without drivers, is commended and enforced; but the Weſt Riding is too juſtly accuſed of glaring defects in the conſtruction and management of their ploughs and wheel-carriages. This

This chapter is chiefly occupied with a particular and valuable account of that important acquiſition in the agricultural art, the thraſhing mill, the merit of which invention appears due to North Britain.

Chap. 6. The *encloſing of lands*, both in waſtes and fields, is ably recommended;—the queſtion, as affecting population conſidered, and clearly decided in favour of this mode of occupation. The following paragraph contains a ſound, if not a new obſervation:

"Another thing which has eſcaped the notice of theſe gentlemen is, the number of people who receive employment from the hides and ſkins of the animals depaſtured on graſs land. While they examine the field, they perhaps do not ſee a ſingle perſon amongſt the beſtial: Hence they ſet down at once, that the graſs-ſyſtem is deſtructive to the population of the country. But let them conſider the number of curriers, ſhoemakers, woolcombers, and other manufacturers, who are thereby provided in work, and they will allow, that an acre of graſs affords employment to as many people as an acre of corn land. This point is ſo clearly elucidated in the Hereford Survey, that we beg leave to refer the candid inquirer to it for a full proof."

In fine, the whole reaſoning on this point is ſupported by inconteſtible arguments.

In chap. 7th, on *arable land*, ſect. 2. the queſtion of Summer-fallowing on clay or ſtrong ſoils, of late ſo much agitated, comes again under diſcuſſion; and the author has to combat the opinions of thoſe great authorities, Marſhall and Kent, who have advanced many ingenious theoretical arguments againſt the practice, which, though confeſſedly ſpecious, muſt yield to the ſound and practical proofs adduced by our author in favour of it. The hints here offered by the ſurveyors, for conducting the operation of a complete Summer-fallow, are highly deſerving of the attention of every farmer; and we are decidedly of opinion, that, in the diſtricts in queſtion, this buſineſs is too generally performed in a careleſs and ſlovenly manner.

In ſection 3. are given ſketches of the uſual *rotations of crops*, &c. on ſeveral farms of various extent in the Riding. We cannot withhold from our readers that of a farm in Marſh-land, as it affords an inſtance, almoſt peculiar, of the employment of ſuch a number of hands and horſes, and ſucceeded by ſuch abundant and uſeful products.

" The rotation of crops purſued upon a Marſh-land farm, conſiſting of 432 acres of arable land :—The ſoil where the principal part of the potatoes are grown, is a good warp ; the other part, on which potatoes are alſo cultivated, a mixture of warp and ſand ; the remainder of the land, clay, with a ſmall portion of warp, but too ſtrong to grow potatoes, except about 70 acres, which is tolerably good potato land, but at too great a diſtance from the river. Graſs land only ſufficient to keep two milch cows, and horſes neceſſary for working the farm : 69 acres of the beſt warp land, divided into three equal parts : 1ſt, fallow with from 16 to 20 loads of manure *per* acre ; ſet it with potatoes ; after, ſow wheat ; and then fallow again : 3 acres of the ſame kind of land, that is liable to be damaged by ſparrows, when ſown with corn, is ſet with potatoes every year, with about 10 loads of manure *per* acre each year : 84 acres of the lighter land is divided in the ſame manner, one third fallow, with 10 loads of manure *per* acre ; ſet potatoes, and then ſow wheat ; and fallow again : 42 acres of land, lately an old paſture, divided into three parts ; one-third flax, then ſown with rape, and, after they come off, plough and harrow the land three or four times, and lay upon it about 20 loads of manure *per* acre, which will make it in great condition ; after which, ſet potatoes, then ſow flax again, and rape after : 150 acres divided into three parts ; 1ſt, fallow ; 2d, wheat ; 3d beans, drilled at nine inches diſtance, hand-hoed twice, at 6s. *per* acre ; fallow again, &c. : 80 acres of land that was lately in old graſs, divided into four parts ; fallow, wheat, beans drilled, and oats ; then fallow again, &c. The remaining four acres thrown to any of the crops that are likely to fail. Rent 25s. *per* acre ; aſſeſſments, 5s. *per* acre.

Diſtribution of crops for 1795.

	Acres.	Average prod. of an Acre.
Wheat	121	from 3 to 5 quarters.
Beans	70	from 3 to 6 quarters.
Oats	20	from 6 to 10 quarters.
Flax	14	from 45 to 55 ſtones.
Rape	14	from 4 to 5 quarters.
Potatoes	68	from 60 to 100 ſacks.
Fallow	121	
To be thrown where a crop is likely to fail	4	
	432	

Servants,

Servants, horses, and cows, kept upon the farm:

4 Labourers,
16 House servants,
26 Horses,
2 Milch cows.

"The above is an account of a farm, belonging to the best manager in Marsh-land. We must observe, he fallows his land very often; yet he is well paid by his superior crops. The last year (1795) he had 100 sacks *per* acre off most of his potato land; and sold them from 8s. to 12s. *per* sack of 14 pecks. All their corn is sold by the quarter of 8 Winchester bushels, though I believe their measure rather overruns."

(To be concluded in our next.)

PART III.

EXTRACTS FROM AGRICULTURAL PUBLICATIONS.

Extracts of the Evidence given before the Committee of the House of Commons, appointed to inquire into the Scarcity of Provisions, &c.

Examination of Mr CLAUDE SCOTT, *Corn Merchant.*

WHAT is your opinion, from the best information you have been able to obtain, of the produce of the last harvest, as to wheat?

In general, I understand the produce turns out to be unusually defective; on the whole, I question whether the produce will turn out more than half a good crop; for in the most productive counties, such as Essex, Kent, and Suffolk, I understand the medium produce is not more than two quarters *per* acre; the quality, however, is good. In other counties, particularly the northern counties, the harvest has been less productive, and the quality unusually bad.

What prospect do you conceive there is of a supply of wheat from foreign countries?

I think, generally, the ſupply will be moderate; the crops in general abroad have not been very productive; and, in ſome parts, where we uſually look for ſupplies, the exportation has lately been prohibited. Our principal ſource of ſupply may be looked for, this year, from the Baltic, and chiefly from Poland; for the produce of the harveſt, in the Pruſſian provinces bordering on the Baltic, has been unuſually bad, and the quality very light and inferior. The King of Pruſſia has already prohibited the export of all other grain but wheat; and it is apprehended, that prohibition may be extended to wheat, particularly in the event of a further advance in the prices in Great Britain, which might create an alarm in thoſe countries. Some quantity of wheat may alſo be expected from Ruſſia, but I have no means of aſcertaining how much. The exportation of corn is ſtrictly prohibited from Holland, Flanders, and France. By very recent information from Havre de Grace, I am informed, that the crop of wheat in France is one third leſs than the preceding year; the prices one third higher: but, compared to the price in other countries, they are very low. With reſpect to America, by the laſt advices, which came yeſterday, dated Philadelphia, 25th December laſt, and by previous advices, the produce of the crop in America, laſt year, exceeds that of any year for the laſt ſeven years; but far ſhort of what has been the produce preceding that period: the reaſon is, the devaſtation committed by the Heſſian Fly, which has diſcouraged the growth of wheat. The prices of flour, including all charges of freight, &c. would ſtand in about 90s. *per* ſack; and of wheat, about 100s. *per* quarter. I underſtand, likewiſe, that a quantity may be expected from Canada; but I have no information what quantity, or at what prices.

Do you conceive that there are any means, and what are they, of economizing the quantity of wheat now in the country?

From the opinions I have collected from all perſons concerned in the corn trade, and which coincide with my own, I do not know any better means of economizing the conſumption of wheat, than by recommending to the public not to eat any bread until it has been baked a certain number of hours.

Do

Do you conceive, that prohibiting the millers from making more than one ſort of flour would or would not lead to any economy of that article?

I do think it would not, becauſe I believe that nearly the whole produce of the wheat is conſumed directly for human food, and indirectly ſo in the ſupport of ſwine and poultry; a ſmall part is likewiſe uſed for horſes.

From your own experience, do you know whether coarſe flour or fine flour will keep longeſt without damage, and will bear beſt the water carriage?

Moſt undoubtedly fine flour will keep longeſt in any ſituation; and that, I think, is proved by the American flour, which is the fineſt in the world, keeping in good condition much longer than any other flour of the beſt ſort in Europe. The greater the mixture of bran in any flour, the greater tendency there is to fermentation.

What do you mean by a good crop of wheat?

That which, of itſelf, is ſufficient to ſupply the conſumption of the country.

As half the ſupply neceſſary for the conſumption of the country is deficient, how do you ſuppoſe that deficiency will be made up?

I conſider there was a great ſurplus, at the commencement of this harveſt, of the produce of the laſt year, perhaps two months conſumption of the country, and alſo a quantity of foreign wheat, that was in different parts of the kingdom; nevertheleſs, I am clearly of opinion, there will be no poſſibility of obtaining a quantity of wheat, ſufficient to ſupply the quantity uſually conſumed of wheaten bread.

Do you know what has been the ſtate of the crops of barley and oats?

I believe they are, in point of quantity, pretty good, but badly harveſted, and in quality exceeding bad. I ſpeak of the ſouthern parts of England.

Can any conſiderable ſupply of theſe articles be expected from foreign countries?

Some oats may be expected, but leſs in quantity than in any year I remember. With reſpect to barley, I believe, the importation will be much leſs. We import very little barley at any time.

Examination of Mr ARTHUR YOUNG.

HAVE you any information reſpecting the produce and quality of the laſt crop of wheat?

I have had letters from moſt parts of the country, the purport of which is, that the deficiency of the crop generally amounts to one third; but from various perſons, I had ſecond and third communications correcting their ſtatements, as they advanced in thraſhing, which makes the deficiency ſtill greater, in ſome caſes amounting to one half. The deficiency that has been corrected in the ſecond and third accounts, includes quality as well as quantity; from which I conclude, if ſimilar accounts were received from other correſpondents, the deficiency would be found to amount to more than one third.

When you ſtate that the deficiency of the crop amounts to one third, or one half, do you mean one third or one half of an average crop, or of an abundant crop?

I always mean one third of an average produce.

How many buſhels do you allow, per acre, in your computation of an average crop?

Something between twenty-two and twenty-four.

Have you any information with reſpect to the ſtock in hand at the period of the laſt harveſt, and the quantity of foreign wheat in the country at that time?

I know nothing of the quantity of foreign wheat; but my information is, that the ſtock on hand was very ſmall (probably not one month's conſumption) in the country. I had no information what ſtock there was in London. I ſpeak of the end of the harveſt, which was very late.

What is your information reſpecting the laſt crop of barley, oats, and rye?

The produce of barley and oats deficient, perhaps, one fourth or one fifth in point of quality; in ſome places the crops worſe, but varying conſiderably; in other places, the crop equal to an average one in quantity, but in point of quality miſerably bad, inſomuch that I know of farmers that have ſold barley from 20s. to 60s. per quarter from the ſame farm; and I have had information which ſeems to confirm this account, which is, the price of oat flour in Weſtmoreland, and that is 4s. 6d. the ſtone of 14 lb., being the ſame prices as

wheat

wheat flour in Suffolk, with wheat of 11s. 8d. per bushel. With regard to rye, I have no particular information.

Have you any opinion respecting the consumption of wheat?

It is about one quarter per head on the population of the country, among those who live upon wheat; and this seems the settled result of all inquiries on the subject.

Can you suggest any means of economizing the expenditure of wheat?

I think the present scarcity so truly alarming, that no economy whatever, upon the mode of consuming wheat, will answer the exigency of the moment. In Suffolk, attempts have been made, and are now making in some parishes, to mix barley and rye with wheat, and to make a browner sort of wheaten bread; but the distress of the poor is great, notwithstanding every effort of this sort. In regard to a standard wheaten bread, I cannot see any considerable relief that can result from it. It seems to me, that the whole flour of the wheat, reckoning that flour at about 45 lb. in 60 lb. of wheat, is eaten at present. Something much more effectual than this is absolutely necessary; and I venture to propose, as an opinion, that nothing short of stopping the consumption of oats by horses, or importing rice to a very great amount, or extending the use of soup almost generally, will be equal to the demand occasioned by the scarcity.

I beg to mention a circumstance respecting soup: I made a copper full of soup every day; and in order to try the effect of the leanest meat that could be procured, I killed ten of the very leanest sheep there were in a flock of 500; and that effect was exceeding good. To each copper, containing 30 gallons, I put one sheep of from 25 lb. to 30 lb., a peck of potatoes, half a peck of onions, a peck of carrots, a peck of turnips, half a peck of peas, and 6 lb. of rice, and it made most excellent soup, which the poor relished exceedingly; and the outsetters of the parish, who lived five miles off, came for it very readily; from which I conclude, that one very great resource for the kingdom at present, is the establishment of soup shops, or perhaps rather to enforce all parochial assistance whatever to the poor, universally, to exclude the consumption of wheat; which, if general, would do more to alleviate the present scarcity, than all assizes of bread that can be devised.

PART

PART IV.

AGRICULTURAL INTELLIGENCE.

INDEPENDENT of the inauſpicious circumſtances which attended the concluſion of the preceding year, the firſt quarter of 1800 may be conſidered as tolerably favourable to the general purpoſes of huſbandry; and, in the arable diſtricts, the labour of the ſeaſon is almoſt as far advanced as in ordinary years. The weather in January was variable, which prevented the ploughing from going ſteadily forward. February was, upon the whole, a dry month, and a conſiderable quantity of wheat and oats were ſown upon light ſoils. A ſevere froſt about the beginning of March prevented the further progreſs till the middle of the month, when fine weather ſet in, which has been improved to the utmoſt by the generality of huſbandmen.

It would have given us pleaſure to preſent a ſtatement equally favourable of the rural economy of the higher diſtricts, which comprehend more than one half of North Britain: this is unfortunately not in our power. From reſpectable ſources of information, we learn, that ploughing in theſe ſituations is very far behind; and that the different ſtorms which have prevailed ſince laſt harveſt was finiſhed, have not only prevented field work from being executed, but alſo much injured the ſtock of cattle and ſheep. Fodder, which was originally ſcanty, and inferior in quality, is in many places nearly exhauſted, while the grain on hand is generally unproductive and unſound, yielding a ſmall portion of nutritive food to the inhabitants, and hardly fit to be uſed for ſeed. Several counties are in this reſpect more deplorably ſituated than in the year 1782, when ſupplies of meal and ſeed corn were benevolently provided by the landed proprietors and the public.

Thoſe who reflected upon the diſaſtrous circumſtances which almoſt uniformly accompanied the crop 1799, from its being put into the ground till it was gathered into

into the ſtack-yard, early predicted, that a very great advance in the price of grain would neceſſarily follow, which, unhappily for the country, has taken place in the articles of barley, oats, and peas, to a degree above what was ever experienced. Meal has of late bore a price exceeding any thing known in Scotland; and, unleſs ſome ſubſtitute or other is procured, there is ſerious cauſe to apprehend, that the increaſed demand from the unproductive diſtricts, will occaſion a general ſcarcity of that article during the Summer months. Were it not for the free tranſit of corn over all Scotland, ſeveral places would be totally unprovided; and we obſerve with pleaſure, a late deciſion of the Supreme Court of Juſtice upon this point, which, under exiſting circumſtances, muſt be productive of beneficial conſequences to the public welfare.

The Legiſlature have not been inattentive to the diſtreſſes of the country, but have uſed a variety of expedients, with a view to leſſen the evils of ſcarcity, and prevent it from being felt in a more alarming degree. It admits, however, of ſome doubt, whether the iſſue of theſe meaſures will accompliſh the propoſed end; for a deficient crop can never ſupply the ordinary demand: And as other parts of Europe have been alſo viſited with adverſe weather, it is evident that the ſtricteſt economy will be neceſſary, to make the ſtock in hand, even when aided by the expected foreign ſupplies, anſwer the unavoidable conſumption.

In North Britain, a ſcarcity of oat-meal, which is the chief food of the great body of the people, is ſeriouſly to be apprehended; and this, in all appearance, can alone be remedied by limiting the quantity given to pleaſure horſes, or thoſe not employed in uſeful purpoſes. The working ſtock, in fact, from the inferiority of the grain, require a greater abundance than uſual, and any curtailment would be ſucceeded by double loſs afterwards; but thoſe of a different deſcription may be ſafely reſtricted from the uſe of oats, without any real injury to the owners, but with much advantage to the public.

Under all the calamities of this memorable year, it muſt and ought to be recorded, to the honour of the lower ranks, that they have been generally diſpoſed to ſubmit to them with patience and fortitude. In country pariſhes, meal has been ſold at prices very much reduced;

ed; but, in great towns, the caſe of working people has not been attended to with ſo much commiſeration. Perhaps, with equal good intentions, it is impoſſible, conſidering the number of thoſe who ſtand in need of aſſiſtance, and the different modes required to be taken for raiſing the neceſſary funds, to give relief to the ſame extent. It is obvious, however, that the families of the working people cannot be ſupported, unleſs wages are either raiſed much higher than has uſually been paid for labour in this country, or that meal is provided for them greatly below the market rates. This ſubject is important; but we forbear ſaying more, truſting that every thing will be done by thoſe provided with the means, for alleviating the diſtreſſes of the lower ranks, upon whoſe welfare ſo much of the proſperity of the country materially depends.

[The following Articles, among a number of others ſent us, were *omitted* in laſt Number for want of room.]

From the Newſpapers, with Remarks by a Correſpondent.

THE comparative advantages of the labour of horſes and oxen, have been for ſome time under the conſideration of the public. His MAJESTY has unqueſtionably tried the latter upon a larger ſcale than any other perſon, as he does not work leſs than 180 oxen upon his different farms, parks, and gardens, and has found them to anſwer ſo well, that there is not a horſe now kept for tillage. Upon the two farms, and the Great Park at Windſor, 200 oxen are kept, including thoſe coming on and going off. Forty are bought in every year, riſing three years old, and are kept as ſucceſſion oxen in the park; 120 are under work, and 40 every year are fatted off, riſing ſeven years. The working oxen are moſtly divided into teams of ſix, and one of the number is every day reſted; ſo that no ox works more than five days out of ſeven. This day of eaſe in every week, beſides Sundays, is of great advantage to the animal, as he is found to do better with ordinary keep, and moderate labour, than he would do with high keep and harder work.

Theſe

Theſe oxen are never allowed any corn; as it would prevent their fattening ſo kindly afterwards.—Their food, in Summer, is only a few vetches, by way of a bait, and the run of coarſe meadow, or what are called lea-ſowes, being rough paſtures. In Winter, they have nothing but cut food, conſiſting of two-thirds hay, and one-third wheat ſtraw; and the quantity they eat in twenty-four hours is about 24 lb. of hay, and 12 lb. of ſtraw; and, on the days of reſt, they range as they like in the ſtraw yards; for it is to be obſerved, they are not confined to hot ſtables, but have open ſheds, under which they eat their cut provender, and are generally left to their choice to go in or out.

Under this management, as four oxen generally plough an acre a day, and do other work in proportion, there can be no doubt but their advantage is very great over horſes, and the reſult to the public highly beneficial.

The forty oxen that go off, are Summered in the beſt paſture, and finiſhed with turnips the enſuing Winter.

A correſpondent remarks—'The above is ſo contrary to the experiments made reſpecting the working of oxen, that I am inclined to call in queſtion the accuracy of the ſtatement. In the *firſt* place, A yoke of oxen will not plough an acre of ground *per* day, unleſs a broad furrow is taken. *2dly*, They are incapable of undergoing five days conſtant labour *per* week; it being found neceſſary, in ordinary caſes, to keep two ſets, the one to relieve the other. *3dly*, They cannot be properly ſupported (as we of courſe muſt ſuppoſe his Majeſty's oxen to be) upon 36 lb. of hay and ſtraw *per* day. The comparative value of oxen and horſes in huſbandry having been a fertile ſource for diſputes betwixt practical and theoretical men, it would give me great ſatisfaction to ſee the queſtion fairly argued in your Magazine.'

London, Dec. 17th.——The Magiſtrates of Worceſter have given notice, by public advertiſement, that all perſons guilty of foreſtalling, regrating, or ingroſſing proviſions, are puniſhable by indictment; and of their determination to proceed againſt all ſuch offenders with the utmoſt ſeverity.

Upon the above paragraph, a correſpondent obſerves, 'That theſe obſolete terms, foreſtalling, regrating, and ingroſſing, continually get into the mouths of our municipal officers, whenever proviſions riſe in price, whether they are in the leaſt degree applicable or not. He would aſk the ſapient authors of the advertiſement, who, it is preſumed, are manufacturers, whether a piece of broad cloth, ſold and reſold at every ſtage betwixt Worceſter and London, would ſell, at the latter place, a ſingle halfpenny

halfpenny *per* yard higher, than if it had been directly received by the waggon? Juſt the ſame conſequence will take place in the ſale of beaſts or grain. When carried to Smithfield or Marklane, they will draw their comparative value, whether 5l. or 5s. of profit had been previouſly gained upon them. Many, otherwiſe ſenſible perſons, entertain very abſurd ideas upon this ſubject; which can only be removed by practice and experience.'

The Duke of Bedford is elected Preſident of the Bath and Weſt-of-England Agricultural Society. Lord Sommerville and Mr Hobhouſe are elected Vice-Preſidents.

Sir John Call, Baronet, has written a letter to the above Society; in which, after dwelling at conſiderable length on the ſubjects of Population and Agriculture, he ſays, 'But, taking the data and facts as they are, and as they ſtand incontrovertibly, it is clearly deducible, that Great Britain muſt either continue to import a conſiderable portion of the firſt article of ſubſiſtence, and thereby give an additional bounty on foreign cultivation; or that 160,000 additional acres of land muſt forthwith be brought into tillage, and 30,000 added yearly to that number, to provide for an annual increaſe of 10,000 ſouls in the population.

'Without ſuch a reſource, ſtarvation or emigration muſt enſue; for I will not ſuppoſe that any legal or political ſtop will be put to the increaſe of mankind. It then becomes a queſtion ſeriouſly to be decided, Whether Great Britain, as a commercial iſland, depending greatly on the cheapneſs and excellence of her manufactures, for the ſupport and extenſion of her commerce, and, of courſe, the maintenance of her power, ſhould depend, in a great degree, on foreign nations for her daily bread? If that important point is unanimouſly diſcuſſed in the negative, the argument for bringing every inch of waſte or unproductive land into an immediate ſtate of incloſure and improvement, is ſupported by an imperious neceſſity; and it will become a duty, in the higheſt degree incumbent on the Legiſlature, to meet and provide for this growing demand.'

The good ſenſe and liberal views diſcovered in the above letter, entitles Sir John Call to the warmeſt tribute of thanks from his countrymen. The ſubject is truly an important one; and, to the ſhame of Britiſh legiſlation, has been by far too long neglected. Many millions of acres in England are capable of being converted into rich corn fields; which, at preſent, are almoſt, in a legal manner, locked up as waſte.

Edinburgh,

Edinburgh, Dec. 20.——Laſt week the Magiſtrates of Aberdeen fined a perſon for *couping* meal, or buying it from country people when coming to market, and ſelling it at an advanced price.

The above is another inſtance of municipal wiſdom. Could this poor *couper* ſell the meal one farthing per peck higher than what the country people would have done, to whom it originally belonged? Whenever the purchaſe was made, the one ſtood in the ſhoes of the other, and conſequently was entitled to all the after profits, juſt in the ſame way as if he had bought *a parcel of ſtockings*.

Extracts from Private Correspondence.

SCOTLAND.

Edinburgh, March 10. 1800.——By a letter from a gentleman in Virginia, dated the 18th January laſt, we learn that tobacco has been falling in price for a conſiderable time, and can now be bought at 17s. or 18s. per cwt. Good wheat ſells at 6s. 9d. Sterling per buſhel; and flour 8½ to 10 dollars per barrel of 1¾ cwt.

Extract of a Letter from Aberdeenſhire, March 11.——The ſtate of the crop this year is very bad indeed; and I have no occaſion to ſuppoſe that there will be one half of the *oat-meal* produced this year which we had in 1798. I ſhould rather ſuppoſe, from ſome inquiries which I have made at different mills, that the quantity will not exceed two fifths of the preceding year; for there is not above four fifths of the oats which were raiſed in 1798; and the average of meal from the boll, is rather above than below 8 pecks, or 4 ſtones Dutch weight.

The ſtate of the forage in the higher parts of this county, is ſtill worſe than that of the crop. I have heard of corn and ſtraw being ſold as high as 4l. Sterling per boll, and of young cattle being ſold for a mere trifle. We have had another ſtorm lately. If the weather does not ſet in mild in a very ſhort time, many of the cattle muſt periſh for want of food.

I conſider that the comfortable, if not the neceſſary ſupply of the people of Scotland, for this year, depends upon two things: *1ſt*, The ſtoppage of the Engliſh diſtilleries: *2dly*, The mixture of barley meal with oat meal or flour.

It is much to be apprehended, that bad ſeed will be uſed by many farmers, partly from ignorance, and partly from neceſſity. The danger is, I ſuſpect, not ſufficiently underſtood. In 1782, a ſevere froſt on the 3d Auguſt was very hurtful to the earlieſt and beſt oats, which were then in flower, or in the milky ſtate; it rendered them unfit for the purpoſe of ſeed, though it did not ſtop their vegetation. The later oats, which were of much leſs value for meal, were incomparably better for ſeed, becauſe they were not in flower when the ſevere froſt happened in Auguſt. But this year we had ſevere froſts at different periods of the harveſt, and eſpecially in September, when the late oats were in the flower, or in the milky ſtate; and I apprehend, that nothing but actual trials can juſtify the farmer for ſowing one parcel of oats in preference to another. The experience of 1782, may tend to miſlead thoſe who do not conſider the difference of circumſtances; and the apparent freſhneſs of grain is no criterion for its being fit for the purpoſe of ſeed.

Oats no doubt are a hardy kind of grain, as nature has furniſhed it with a *great coat* to defend it from the inclemency of the weather; but it is when the plant is in flower, and before this great coat can be buttoned cloſely, if I may uſe the expreſſion, that its powers of vegetation are moſt eaſily and moſt deeply wounded.

Extract of another Letter from Aberdeenſhire, March 18. ——Our county is really in a deplorable ſtate; for the fields are this day covered with a deep ſnow, and the ſtraw for our cattle is almoſt conſumed. Bear, with fodder, has given 4l. per boll, and oats, not fit for ſeed, 2l. 10s. per ditto, Aberdeenſhire meaſure. Hay ſells at 2s. per ſtone of 20 lib. Amſterdam; but, what is worſt of all, it is difficult now to get it in this corner at any price. I rent a farm at 50l.; and this day there is not more ploughed than 10 bolls of oats will ſow. Many of my neighbours have leſs in proportion, and few of them more. The poor have been ſupplied with meal on lower terms than with you, and yet they are run of money, and credit is ill to be had. Beſt oat meal 1s. 10½d., and bear meal 1s. 4d. per peck of 9 lib. We are getting ſeed oats from the Garioch,

Garioch, at 1l. 12s. per boll, and from the country about Kincardine O'Neil and Banchory, at 40s.

I have had occaſion to notice both the theory and practice of raiſing early potatoes; but have found the following method moſt efficacious for obtaining an early crop:—Take the potatoes whole, and cover them up in horſe litter of a moderate warmth; let them remain there until they put forth ſhoots of 4 or 5 inches in length, which they will do in two or three weeks; then take them carefully from the litter, and put them, perpendicular and equal with the ſurface, into a light dry ſoil, with more horſe dung. If the ſeaſon is tolerable, they will vegetate amazingly faſt. In this cold country, the laſt week of April, or firſt of May, is early enough to venture them out. By theſe means, potatoes may be had four weeks earlier than the ſame variety can be raiſed in any degree of perfection, were they planted in the uſual way. The above was communicated to me by a reverend clergyman of my acquaintance, who has practiſed it a dozen of years, and who has ripe potatoes commonly at his table by the 4th of July. Northward of the Grampians, we are at leaſt a month later than you are in the Lothians.

Berwickſhire Quarterly Report.

Turnips, which from the beginning could ſcarcely be reckoned half a crop, ſuffered a good deal by the froſt. They were moſtly conſumed by the laſt week of March, though every means was uſed to ſave them as much as poſſible.

Young *clovers* do not appear to have been injured during the Winter; but vegetation is very backward; and thoſe few fields which were ſown in Autumn, have not a promiſing appearance.

A conſiderable quantity of *wheat* has been ſown upon dry ſoils during this quarter, after turnips, &c.; but, upon the cold lands, the greateſt part of the fallows muſt now be ſown with other grain. Sowing of *peas*, *beans*, and *oats*, did not commence generally till the middle of March; ſince which, theſe operations have been carried on with the greateſt activity, the land harrowing better than could have been expected from the bad weather immediately preceding; a good deal of hot ſeed peas are ſown in different places.

There are few cattle now remaining in this county; indeed the number put up to feed was (in conſequence of the failure of turnips) comparatively ſmall. Of the ſheep that were fed, a conſiderable proportion has been already diſpoſed of. Lean

ſtock is likely to ſell well in the courſe of the Spring, and already bring good prices.

In conſequence of the long continued rains in Autumn, the rot has been more than uſually prevalent amongſt the ſheep in particular ſituations. The lambing ſeaſon has been hitherto favourable in the low part of this county, and the graſs is juſt beginning to ſhoot.

The Winter has been ſeverely felt in the Lammermuir diſtrict of this county. Great numbers of young ſheep have died; and from the lateneſs of the harveſt, and long continuance of froſt and ſnow, very little had been got ploughed before the middle of March, which will make the ſmall quantity of corn ſown there very late.

The corn markets kept advancing till the beginning of March, ſince which all the grains have declined a little, except barley, which ſtill keeps its price.

Prices at Berwick, March 22d, per boll of 6 Wincheſter buſhels, were,

	s.	s.		s.	s.		s.
Wheat	60	to 70	Oats	35	to 45	Portlands	50
Peas	56	to 60	Barley	40	to 42	Fine	45

Seed potatoes 40s. per Berwick boll of 40 ſtones.

The butcher markets have experienced a gradual riſe from the beginning of this quarter, and ſtill keep advancing.

Prices at Berwick, March 22d, per lib. of 16 oz. Engliſh

	d.	d.		d.
Beef	5	to 7	Veal	8
Mutton	5	to 6½	Pork	7

March 26.

Fifeſhire Quarterly Report.

During the month of January, neither ploughing, nor indeed almoſt any other kind of work, could be carried on without doors in the county, as the fields were covered with ſnow. Even in the month of February, the labours of the field made but little progreſs, the ground being either bound up with froſt, or too wet for ploughing. Some ley land, in favourable ſituations, was broken up; and towards the end of the month, and beginning of March, ſeveral fields deſigned for wheat, but which had loſt the ſeaſon in Autumn, through the badneſs of the weather, have been ſown. The preſent month has been exceedingly favourable to the farmers.

ers. Much land has been tilled, and the ſowing of oats is far advanced. The land being in fine order for tillage, and the ſeed having got a dry bed, it is to be hoped that the crop will be good. The ſowing of beans and peas is not ſo extenſive as uſual, owing to the high price of ſeed. The farmer cannot ſeed an acre of beans under 3l. 10s., when ſown broadcaſt, which is frequently practiſed in this county.

Current Prices of Grain during the laſt three months.

1800.		s. s.
January.	Wheat, from -	23 to 35 per boll.
	Barley - -	20 to 30
	Oats - -	16 to 25
	Oat meal -	32 to 34
	Peas and beans, none expoſed to ſale.	
February.	Wheat, from -	25 to 42
	Barley - -	22 to 30
	Oats - -	21 to 28
	Oat meal -	34 to 38
	Peas and beans -	25 to 32
March.	Wheat, from -	30 to 48
	Barley - -	25 to 35
	Oats - -	25 to 40
	Oat meal -	38 to 48
	Peas and beans -	27 to 32

During the laſt three months, the price of potatoes has been gradually advancing, and riſen from 12s. to 20s. per boll of 24 Dutch ſtone. The price of hay, of clover, and ryegraſs, from 1s. 6d. to 2s.; and meadow hay 1s. per ſtone. Thatch of wheat ſtraw 8s. the threave of 24 ſheaves a yard round.

The great difference in the prices of the ſame kind of grain, is owing partly to the great difference of quality, and partly to the progreſſive riſe.

Northern Quarterly Report.

The crop in the northern counties of Moray, Nairn, Inverneſs, Roſs, Sutherland, and Caithneſs, has turned out fully as productive as was expected, and will do more than ſupply the conſumption of the inhabitants. Within the laſt two months, there has been cleared out at the different ports within the precincts of Inverneſs Cuſtomhouſe, 2,260 quar-

ters of oats, 1700 quarters of barley, 2020 quarters of wheat, 6 quarters of peas, and 62 bolls of oat meal. And from the county of Caithneſs, a conſiderable quantity has been ſhipped during the ſame period. Perhaps there may remain 10,000 quarters of the different grains for exportation; and it is ſuppoſed that the crop of no county in the kingdom will come nearer the uſual average than that of Caithneſs, notwithſtanding its northern ſituation.

The prices of grain are, for

	s. s.		s. s.
Wheat	40 to 45	Peas	30 to 34
Barley	30 to 36	Oat meal	24 to 32
Oats	25 to 42	Potatoes	20 to 24

The latter is much demanded for ſeed. Butcher markets continue well ſupplied. Beef 5d. to 6d. per lib.; mutton much about the ſame; and, from the number of fat cattle ſtill on hand, theſe articles are not expected higher. Hay has not exceeded 1s. per Scots ſtone this ſeaſon.

Notwithſtanding the ſeverity of the Winter and Spring, little loſs has been ſuſtained amongſt the ſheep flocks; and reſpecting the prices of them and cattle, nothing certain can be yet given. The great ſcarcity of provender has put the latter in bad condition; and where they are uſed in farm labour, this may occaſion the ſowing of the crop to be much retarded.

The conſtant froſt and the frequent falls of ſnow, which prevailed from the 17th December to the 12th March, allowed little ploughing to be executed till lately; but the Spring has now ſet in very favourably, and the ground is in excellent condition for ploughing and harrowing. The oat and peas ſeed has become general; and, upon the whole, labour cannot be conſidered as farther behind, than it is upon an average of years. In the Highland diſtricts, they ſeldom begin to plough before the 1ſt of March; and conſequently, in that reſpect, they are not in a worſe caſe than uſual.—— *March* 27.

Eaſt-Lothian Quarterly Report.

Notwithſtanding the adverſe weather that prevailed during the firſt month of the current quarter, and the backward ſtate of aration at its commencement, the labours of the field are now much farther advanced than what was then expected. In the lower diſtrict of the county, where corn crops is the chief object, a conſiderable quantity of wheat, though not to the uſual extent, has been ſown; the

oat

oat and bean ſeed is nearly finiſhed. Some barley upon the dry ſoils, after turnips, is ſown; and a few fields of potatoes are alſo planted. Some of the coaſt-ſide farmers have already concluded their ſeed work for this ſeaſon; and almoſt in every ſituation the land has harrowed well, being completely mellowed by the repeated black froſts, which have brought the ſtrongeſt ſoils into a reducible ſtate, as faſt as they were ploughed up.

The markets for grain, with the exception of wheat, have continued rapidly to advance, though, perhaps, the demand from the higher diſtricts for ſeed corn has occaſioned a temporary riſe. Wheat, which is now dry, and in a condition for keeping, ſells from 36s. to 51s.; barley, 35s. to 46s.; oats, 34s. to 46s.; beans, 30s. to 50s.; peas, 45s. to 52s.; and tares at the enormous prices of 60s. and 80s. per boll; all Linlithgow meaſure. Oat-meal, 3s. per peck in retail; and common potatoes for ſeed, 30s. per boll, of 24 ſtone Dutch weight. Some of the early varieties have ſold as high as 4s. per peck. Vegetables of all kinds are ſcarce; and, in ſome places, can only with difficulty be procured.

The *Turnip* crop, which was much injured by the late froſts, is now nearly conſumed; owing to which, it will be difficult to carry on the ſmall portion of fat ſtock on hand. Barley, in ſome inſtances, has been boiled and given to cattle; which is found to anſwer well, though the expence is very great. The early ewes are lambing faſt; and every exertion has been made to bring ſtock of every deſcription into condition for an early market.

Graſs land has this year met with a moſt extraordinary riſe, which does not afford room to ſuppoſe that butcher markets will ſoon be reduced to their uſual rates. Perhaps, the prices of grain have occaſioned a number of fields, commonly kept in paſturage, to be broke up by the plough; but whatever has been the cauſe, the riſe has been general, and, in ſome inſtances, gone the length of 50 per cent. above laſt year's rates.

The higher diſtrict of the county is in a moſt diſtreſſed ſtate, as very little ploughing is yet performed, and hardly any of the laſt crop can with ſafety be uſed for ſeed. Fodder is very ſcarce; and a conſiderable mortality has taken place among the hogs, or young ſheep. Great ewes may be ſtated, as ſelling from 6d. to 18d. higher than laſt year. At Gifford Spring Fair, a pretty large ſhow was preſented, which in general were ſold.

Hay experienced a declenſion in price about the firſt of February, and now ſells from 1s. to 1s. 4d. per ſtone, or from 4l. 10s. to 6l. per load. The quantity on hand is not great; but if the weather continues favourable, the working ſtock will probably be early put to graſs, which may leſſen the demand for that article.

Upon the whole, the firſt quarter of 1800 might have been conſidered as highly favourable to the farmer, if rural economy had not remained in ſuch an imperfect and backward ſtate at its commencement. A doubt can hardly be entertained, but that the half work given to laſt year's fallows, and the conſtant humidity which prevailed till the middle of February, muſt have great influence upon the enſuing crop. Still, under all theſe diſadvantages, the huſbandry of this diſtrict deſerves to be viewed in a ſuperior light to what, three months ago, the moſt ſanguine perſon could have reaſonably expected.—— *March* 31.

Extract of a Letter from Kelſo, March 25.—Grain of all kinds has been riſing every week; and, in particular, oats for ſeed have got up to the amazing price of 50s. per Berwick boll of 4 firlots. There is a great want of ſeed-oats, owing to the general failure of the crop upon the higher grounds. Few beans or peas will be ſown this ſeaſon, as the price is ſo extravagant. A conſiderable quantity of wheat was ſown the latter end of February, and beginning of this month, upon the turnip and bare fallows; and, in general, we have got a wonderful good ſeaſon. Barley ſeed will commence in a few days; the preſent price is about 50s. per Berwick boll, but expected higher. It is my opinion, that a vaſt quantity of land of the inferior quality will not be ſown this ſeaſon; and that the farmers upon the high grounds will be put quite out of their uſual rotations, to the great injury of their ſtock. With reſpect to the market for fat beaſts—Feeders have been hurrying on their ſtock for theſe three weeks' paſt, owing to the want of turnips; conſequently, the market has been ſo much overſtocked, that ſheep of 20 lib. per quarter have fallen 10s. Beef has maintained its price pretty well, being worth 7s. 6d. and 8s. per ſtone of 14 lb. avoirdupois, ſinking the offal. Thoſe who can carry on till May-day, (and few will be able), may expect a much higher price, there being few on hand, compared with the ſtock of former years. The young and breeding ſtock are in general in bad condition; a great quantity of the former are already loſt; and the appearance of a crop of lambs is ſo bad, that it is almoſt certain that lean ſtock will be very high.

We

We are all turned great œconomiſts in the articles of flour, oat meal, and mixed bread. After ſhealing the wheat, no bran is taken out of it; and potatoes are uſed as ſubſtitutes for oat meal and bread. A conſiderable quantity of this valuable eſculent root, of the early kind, is already planted. I do not remember to have ſeen ſo little ſtraw in the ſtack-yards at this ſeaſon; and I need not add, that there will be little corn to the bulk.

Mid-Lothian Quarterly Report.

During the whole month of January, from the prevalence of ſnow, rain, or hard froſt, very little field work was done, even in the low parts of the county; while, in the moorlands, there was nothing done at all, except merely leading in, from time to time, as it could be got thraſhed, the miſerable remnant of the preceding crop. In February, the weather ſoftened gradually to a more genial temperament; and, although generally attended with froſt during the nights, admitted the different operations of ploughing and ſowing, there being a conſiderable proportion of the wheat land finiſhed in this month, that was unavoidably poſtponed from the Autumn ſeaſon: ſome oats and beans were ſown, and even potatoes planted, all in pretty good order. The ſtate of the weather in March was not ſo favourable. From the 4th to the 16th inclusive, the froſt prevented all tillage; and being immediately ſucceeded by heavy ſnow or rain, the labour was thrown far behind, as well as the lands into a bad ſtate for tillage; and although, from the 17th to the end, both the plough and the harrow were well employed, yet a conſiderable proportion of the oat and bean ſeed land remains to be accompliſhed. Several fields of Autumn ſown wheat (which were all laid down in an unfavourable condition) have alſo failed; a circumſtance to be regreted, merely as occaſioning a loſs of ſeed and labour, as there can be little doubt, that the crop with which they have been, or may yet be reſown, whether of oats or barley, will yield full as large a return of food for the community.

The prices during this quarter have been uncommonly high. About the *Candlemas time*, indeed, there was a conſiderable depreſſion in the rate, both of corn and fodder (a very uſual occurrence at that term), which tended to confirm the unjuſt ſuſpicion, that the former high price had proceeded more from a fictitious than a real ſcarcity. Whether this impreſſion is yet effaced from the public mind, it is not material to inquire; but,

but, from the market prices having again advanced, we can have no hesitation in renewing our recommendation of the most rigid œconomy in the use of corn, as well as the utmost possible exertion to get a foreign supply. The following have been the state of the markets:

	Bushels.	*January.*	*February.*	*March.*
		s. s.	s. s.	s. s.
Wheat per boll,	4,114 from	38 to 42	36 to 40	40 to 45
Beans and peas,		32 to 36	32 to 35	40 to 50
Barley ditto,	5,962	32 to 35	32 to 35	35 to 42
Oats ditto,		30 to 38	30 to 36	35 to 45
		d. d.	d. d.	d. d.
Oat meal per peck, 8 lib. Dutch,		30 to 32	29 to 30	30 to 36
Potatoes per peck, about ¼ cwt.		15	14	16
Beef per lb. 17½ oz. avoirdupois,		5 to 7	5 to 7	6 to 8
Hay per stone, 22lb. avoirdupois		21 to 26	16 to 18	21 to 24
		s. s.	s. s.	s. s. d.
Oat straw, about 15 stone, hay weight		16 to 17	10 to 14	14 to 17 6
Wheat straw, ditto, for litter		9 to 10	6 to 8	9 to 10 6

Haddington, April 4.—We had a full market this day of all sorts of grain: The sale was heavy, particularly for beans and peas, of which grains a far larger quantity was presented than at any market this season. Wheat also sold dull, and prices declined nearly 2s. per boll. As the demand for oats is great, that grain maintained its price, and good barley rather met with an advance. There being few purchases made at the seaports for some time past, occasions our markets to be generally well supplied, though the demand for wheat has been uniformly less this year than usual. Prices—Wheat 36s. to 49s. 6d.; barley 38s. to 47s.; oats 36s. to 45s.; beans 30s. to 48s.; peas 35s. to 51s.; tares 70s. to 75s.;—all per Linlithgow measure.

ENG-

ENGLAND.

Doncaſter, March 21.—All kinds of grain are exceſſively dear; and ſeveral ſmall farmers are almoſt ruined with buying ſeed. Many ſtacks of Spring corn, that were thought decently got, have turned out rotten, mouldy, and of little or no value. We have ſevere weather for the ſeaſon; and the lambs are coming faſt into a cold and hungry world.

York, March 15.—The Grand Jury of this extenſive county, impreſſed with a conviction, that, at this criſis, it is the duty of all to ſtand forward in the cauſe of their country, have come to a number of reſolutions reſpecting the alarming ſcarcity of grain, and the means neceſſarily required for rendering the produce of the kingdom equal to the conſumption of the inhabitants. Among ſeveral others, we obſerve the following reſolution, which decidedly expreſſes their ſentiments upon a point long conſidered as the chief obſtruction to agricultural improvements:

Reſolved,—That it ſeems a very well-founded opinion that was given by the perſons appointed to examine into, and report upon the General State of Agriculture in this country, when they almoſt unanimouſly and uniformly declared, that the want of a fair and permanent compenſation to the proprietors, in lieu of tithes in kind, is one of the greateſt obſtacles, not only to encloſure, but to the improvement of agriculture.

Theſe reſolutions contain matters of the utmoſt importance to the intereſt of Britain, and are ſigned by Sir George Armitage, Sir Thomas Pilkington, Sir Charles Turner, Baronets, and twenty other reſpectable gentlemen. Inſtead of viewing the ſcarcity as temporary, and only requiring the application of palliatives, the Grand Jury very judiciouſly point out the real cauſes of the evil, and ſuggeſt remedies which would effectually prevent a repetition of the preſent calamities.

Wakefield, March 10.—The weather, for three weeks back, has been tolerably open, and a good deal of land has been got ploughed up for barley and oats, by thoſe farmers who had their horſes in proper order; but the high price of corn, and ſcarcity of hay, has prevented ſeveral ſmall farmers from bringing their working cattle into condition, as they apprehended they could not maintain them through the Winter,

Winter, by which means they will lose the benefit of the present frost, for making their land harrow freely. Very little of any thing is yet sown; for the frost is so severe as to stop ploughing, and it is just now beginning to snow. Fat cattle are high; and, as the turnip crop is nearly consumed, I fear a sufficient quantity will not be kept on to furnish a regular supply till the grass cattle come to market. Beef 7½d. and 8½d. per lb.; mutton 7d. and 8d; wheat 11s. to 15s. per bushel; barley 5s. 6d. to 8s.; fine ditto for seed 10s.; oats 5s. 6d to 7s. 6d.; new beans 10s. to 13s.; old ditto for seed 14s. 6d.; very few beans of crop 1799 are fit for seed.

Stafford, March 18.—Every article of grain has been very high in our markets: I have lately sold wheat from 15s. to 19s. per bushel; barley at 10s. 6d; damaged ditto 5s. or 6s.; oats at 8s.; beans 13s. or 14s.; peas that are good seed 18s. or 20s.; all per bushel of 9½ gallons, which is our customary measure. Hay sells from seven to eight guineas per ton. Vetches that are sound cannot be procured. I had it in contemplation to sow thirteen acres; and, after great difficulty, could only procure ten bushels, at the extravagant price of 17s. per bushel, and those very bad; for, having tried them in a green-house, I found that not above one fourth of them have come up. I then sent to London, but the price of them in that market was from 21s. to 24s. per bushel; even these could not be warranted; so I will only sow a small quantity. My lambs are dropping fast every day; as yet I have lost only one. At our last fair, lean stock sold low, as the major part of farmers have not provender to spare. Fat cattle 6d. and 7d. per lb. Cheese 3l. 10s. per cwt.; butter 15½d. per lb. I have fed several beasts this Winter with boiled barley, which brings them on fast; they got a peck each per day. Straw is scarce and dear. Hope next harvest will be better than last, otherwise this country will be in a dreadful state.

Lincoln, March 18.——The circumstances of the times have occasioned every prudent family to adopt a variety of expedients to lessen the consumption of wheat and potatoes; and inferior grains are generally used as substitutes for what has hitherto been considered as the staff of life. The badness of barley has induced the maltsters to decline carrying on their business, which makes a greater portion of grain on hand than otherwise would have happened; indeed, as the quality of wheat is so bad, the transition from the one grain to the other is thereby rendered less difficult.

The

The number of inhabitants in Britain being greatly increaſed, and luxury augmented, it appears abſolutely neceſſary that the Legiſlature ſhould take vigorous meaſures for bringing the waſtes and commons into a cultivated and productive ſtate. If the growth of corn is not increaſed in ſuch a manner as to meet the increaſed conſumption, it is obvious that our money muſt be conſtantly ſent abroad to purchaſe the neceſſaries of life; and as different counties are differently circumſtanced, it would be adviſeable for the Legiſlature to paſs an act, to empower each county to encloſe their commons and waſtes, ſo as they may be properly cultivated, and the quantity of grain and number of cattle thereby increaſed.

The average price of wheat is about 5l.; barley 50s.; beans 84s.; oats 35s. per quarter of eight ſtrikes or buſhels each. Beef and mutton about 6d. per lib., and have not been ſcarce. But turnips being nearly done, I apprehend Winter-fed ſheep will be ſcarce, when the turnip-fed mutton is finiſhed. Hay is not plentiful, and ſells at 5s. per cwt. The rate of markets for lean cattle are not yet well known, it being too early for the graziers to buy in ſtock for their paſtures; but prices apparently will be high.

Northumberland Quarterly Report.

From the middle of January to the middle of February, a total ſtop was put to agricultural operations by the froſt, and ſnow which accompanied it; the third week of February was more favourable, and a great deal of wheat was ſown upon the naked fallows of laſt Summer, as well as upon the land cleared of turnip. A few oats and beans were alſo put in upon dry lands. The froſt and ſnow again ſet in on the 24th February, and continued till the 20th March, which has occaſioned a large portion of naked fallows upon wet ſoils to remain unſown, which of courſe muſt now be cropped with barley or oats; very few peas or beans are yet got in upon the clay ſoils.

The peas and beans of laſt crop are ſo much injured, that very few are fit for ſeed, which has rendered it neceſſary to import conſiderable quantities for that purpoſe, as alſo for mixing with barley for bread.

Turnips in ſome places have ſuffered much by froſt, and a general ſcarcity of this valuable root begins to prevail. The expence of feeding on turnip this Winter has been very high, from 9s. to 12s. per week, and now not to be had at theſe prices.

Fat

Fat ſtock has advanced within the laſt month, and will probably get higher ſoon, as a ſcarcity is expected. The prices at preſent are, beef 7s. 6d. and 8s. per ſtone of 14 lib.; mutton 7d. or 8d. per lib. both ſinking the offal.

In the prices of grain, there probably never was ſo great a variety as this year. The following, I believe, are nearly the averages of the loweſt and higheſt prices for the laſt three months.

Wheat from	7s. to 13s.	per buſhel.
Barley	4s. to 8s.	ditto.
Oats	4s. to 7s.	ditto.
Peas	8s. to 11s.	ditto.
Beans	8s. to 12s.	ditto.

Oats for ſeed have been ſold as high as 7s. and 8s. per buſhel; peas 11s.; and beans 13s. 4d. per buſhel, Wincheſter meaſure.——*March* 24.

Yorkſhire Quarterly Report.

The preſent favourable weather has enabled the farmer to commence the operations of his Spring ſeed-time with promiſing auſpices, except from the uncertainty of the vegetation of a conſiderable proportion of the grain. A greater allowance of ſeed will be ſown on every acre than uſual, which will in no ſmall degree aggravate the evil of ſcarcity, ſo juſtly dreaded. A conſiderable part of the bean lands is ſown; the oats are in great forwardneſs; and ſome barley is put in upon the dry ſoils after turnips; but the preparation for this grain is not generally much advanced, though the turnips are nearly eaten off the ground.

The wheats now aſſume a very promiſing appearance on dry warm ſoils. On the wet and looſe lands, the frequency of bare froſts has affected them ſeverely; on ſome of them the blade is ſcarcely viſible.

From the general deficiency of turnips towards the Spring, ſome apprehenſions were entertained of a ſcarcity of fodder; milder weather has in ſome degree abated them. Hay is ſold from 5l. to 8l. per ton.

The price of wheat is about 14s., though it is rather a falling than a riſing article; barley 10s., oats 6s., and beans at the enormous rate of 14s. per buſhel of Wincheſter, for the beſt of each ſort. The oats have turned out better than many perſons expected; but the quality of general ſamples is miſerably bad. Conſiderable loſs has enſued from warehouſing ſome parcels of this and other grain; and corn this ſeaſon is in too damp a ſtate for keeping on ſpeculation, unleſs it was kiln-

kiln-dried. Potatoes are ſcarce and dear, 4s. per buſhel; many are wanted for ſeed, and it is to be feared many will be waſted, as the cultivators of this root are unfortunately too much in the habit of uſing more than double the neceſſary quantity. The ſets or eyes, judiciouſly cut out, of from three to four ſacks, are ſufficient for an acre, and there will remain nearly two thirds of the potatoes for boiling. This is a circumſtance demanding attention at all times, and now in a tenfold degree.

Fat cattle are ſold at high prices, about 8s. per ſtone of 14 lib. ſinking the offal. Very few are turned off really fat. Lean cattle and ſheep remain at moderate prices. The wedders fattened upon turnips, now flocking into the markets, render the price of mutton ſomewhat lower than beef; the drop of lambs appears rather ſcanty and backward.

Good horſes ſell at high prices; and all ſorts are more in demand than for ſome time paſt, or than could have been expected.——*March* 24.

Extract of a Letter from a Yorkſhire Farmer, dated March 31.—I ſhall endeavour to give you a ſtatement of our preſent markets, &c.; but they vary ſo much, that it is impoſſible to be accurate. Laſt market days, at Wakefield and Pontefract, prices were as follow:

Wheat 40s. to 50s. per load,
Beans 42s. to 50s. per ditto,
Barley 60s. to 73s. per quarter of 8 buſhels,
Oats 50s. to 60s. per ditto,
Bread meal 4s. 2d. per ſtone,
Malt 10s. to 12s. 6d. per buſhel,
Hay 6l. to 8l. per ton,
Butcher meat 5d. to 8d. per lib.
Oil cake 12l. 12s. per ton,
Rape duſt 28s. per quarter,
Turnips 2l. 2s. per waggon load.

Wakefield market, on Wedneſday, was well filled with ſheep, and ſuch as were fat ſold well; but a great many, from want of food, are barely fit for killing. Beaſts of good quality are ſcarce, and many are ſlaughtered before they are in proper condition. No fat lamb is yet preſented in the market; but the ewes are lambing faſt, and promiſe well. Lean beaſts, in good order, ſell well; but the expence of the ſtraw-yard, which is paid at 2s. 6d. per week, limits the demand. It is much to be wiſhed, that a good crop may be got this year, which will ſet all things to rights again; for the hardſhips of

perſons

perſons with ſmall incomes, tradeſmen, mechanics, and little farmers, are much to be lamented. A general apprehenſion prevails, that wheat of the coming crop will be defective. Some few perſons have already ſown part of it over again; but we often ſow oats amongſt it when thin, at this ſeaſon of the year.

On Wedneſday the 28th March, Lord CARRINGTON was elected Preſident of the BOARD of AGRICULTURE, in room of Lord SOMMERVILLE.

The Board of Agriculture, taking into their ſerious conſideration the high price of corn in 1795, and the preſent ſevere ſcarcity, have wrote letters to their different correſpondents in the kingdom, requeſting their opinion on the beſt means of preventing the like in future; which we hope will cauſe the attention of perſons verſant in inquiries of this nature, to be directed to ſuch an important and ſalutary object.

We have not heard of any other particular proceedings which have lately occurred at the Board. But when matters of importance occupy the deliberations of this reſpectable Inſtitution, the ſame ſhall always be fully detailed in this Magazine.

Average Prices of Corn, per Quarter, for England and Wales

Wheat,	Rye,	Barley,	Oats,	Beans,	Peas.
107s. 8d.	78s. 5d.	56s. od.	39s. 6d.	69s. 4d.	68s. 2d.

Oat meal per boll of 140 lib. avoirdupois, 66s. 9d.

Extract of a Letter from London, March 31.—The counties round London have had a favourable ſeed-time; and the different grains are all put into the ground in good order. The wheat fields look exceedingly well, having greatly improved in the courſe of laſt month; though, on ſome of the higher lying lands, they ſtill have a yellow appearance. Seed corn of every kind has been very high this Spring. Oats 60s. to 63s. per quarter. Barley 75s. Beans 66s. Small ditto 72s. Tares are now as high as 21s. to 23s. per buſhel. At Marklane, the prices of grain have been ſteady for five weeks paſt. Wheat was rather higher this day. Fine Eſſex 124s. per quarter. Ordinary and kiln-dried barley 40s. to 50s. Fine mealing barley 70s. to 72s., but few ſamples good. Malt from 50s. to 86s.; fine malt very ſcarce. Feed oats 35s. to 42s. Polands 44s. to

to 49s. No real good oats at market. Hog peas 63s. and 66s.; beans 46s. to 56s.; good rye-grafs 5s. 6d. per buſhel. The prices of clover ſeeds are various; fine from 120s. to 126s.; ordinary very low. The quantity of foreign grain imported into London for three months paſt, has been but ſmall; not more than 15,000 quarters of wheat, and 10,000 quarters of oats. By letters from Embden, we learn that the prohibition of exporting flour, and all kinds of grain from Holland, is continued to the 31ſt Auguſt, ſo that the ports of the Baltic are the only places on the Continent from whence any ſupply of conſequence can be expected. The regulation adopted, of not allowing bread to be ſold till twenty-four hours after it is baked, together with the economy which the rumour of ſcarcity has produced in noblemens and gentlemens houſes, have leſſened the conſumption in London fully one third. Potatoes are very ordinary, and much advanced in price. The beſt Yorkſhire ſort are now ſelling at 14l. per ton, being 3s. 6d. per peck, according to your meaſure. Inferior qualities at 10l. and 12l., and are retailed at 2d. per lib. Garden ſtuffs are equally ſcarce and dear, in conſequence of which the prices of boiling and ſplit peas have advanced; fine Suffolks to 108s., and ſplit peas to 130s. and 140s. Hay and ſtraw have for two months paſt increaſed in price. Beſt meadow hay 126s. to 132s. per load; clover ditto 130s. to 140s.; ſtraw 60s. to 63s. Smithfield market, for ſome time paſt, has been well ſupplied with cattle, ſheep, and pigs. The preſent price of beef, ſinking the offal, is from 4s. 8d. to 5s. 8d. per ſtone of 8 lb. avoirdupois. Mutton 4s. 6d. to 5s. 6d.; veal 5s. to 6s.; pork 9d. per lib. by the carcaſe. There has been a greater proportion of fat cattle at market, of late, than appeared before Chriſtmas, numbers of them being ſtall fed.

Extract of a letter from Newcaſtle, March 31ſt.—The higheſt price given for wheat of this country's growth, at our market this day, was 104s. per quarter. Some ſamples from Norfolk brought 112s.; but we muſt obſerve, that the latter is about one tenth leſs meaſure than the former. We have very little old wheat on hand. Good Dantzig would bring nearly 120s. per quarter. Barley fit for malting is worth 50s. per quarter, and upwards. Oats 50s.; ditto for ſeed 60s.

OBITUARY.

Died at Mount Vernon in Virginia, on the 14th December laſt, the great and good GEORGE WASHINGTON, Commander in Chief of the Army of the United States of America, late Preſident and Founder of the Federal Union of that free and riſing nation.

It is with pride we aſſume the privilege of enrolling his name in the Obituary of eminent and ſkilful farmers, and we have reaſon to believe he would not have diſdained the proſpect of this diſtinction, in the midſt of all the eulogy he has juſtly received, and is hereafter to receive, with the trial ordeal of diſpaſſionate poſterity, and the lapſe of ages.

With his political and warlike life, we have nothing to do; and it is a ſubject only for the hiſtorian. He was one of thoſe, whom the Almighty, in every age, has choſen and raiſed up to promote the ulterior deſigns of his mercy and goodneſs in the melioration of his creatures.

It may be ſaid of Waſhington, as was written by Tacitus of Agricola, that though he was ſnatched away whilſt his age was not broken by infirmity, or injured by decay of reaſon; yet that, if his life be meaſured by his glory, he attained to a mighty length of days; for every true felicity, namely, all ſuch as ariſe from virtue, he had already enjoyed to the full. As he had likewiſe held the ſupreme authority of the State, with the confidenee and applauſe of all wiſe and good men in every part of the world, as well as among thoſe he governed or commanded, and had triumphal honours in a war undertaken in defence of the liberties of his country,—what more could fortune add to his luſtre and renown? After enormous wealth he ſought not; an honourable ſhare he poſſeſſed. As the infirmity of nature requires, in our laſt moments, the tender ſympathy of relations and friends, and the conſoling views of futurity,—theſe alſo he had in his amiable and worthy conſort Mrs Waſhington,—in his kindred, and in that excellent man Tobias Lear, whoſe worth is not unknown in Scotland, and, where beſt known, will be moſt valued. He died with the fortitude of a philoſopher, and, what is much better, with the hopes of a Chriſtian. He, therefore, to continue the parallel, may be accounted happy; ſince,

ſince, by dying according to his own magnanimous, yet humble wiſh, expreſſed in his farewel addreſs to the American people, whilſt his credit was nowiſe impaired, his fame in its full ſplendour, his relations and friends not only in a ſtate of ſecurity, but of comfort and honour, he was to eſcape the unforeſeen evils of futurity, and the ſorrows of declining years. His laſt act, relating to the councils of his nation, was to coincide with the worthy aſſociate of his youth, Mr JOHN ADAMS, and the other Members of the Council of State, and of the Senate, in holding forth and looking for the return of peace, not allowing falſe pride and reſentment to counteract the duties of a Patriot and a Chriſtian, and the return of the deſtructive ſword of war into the ſcabbard. This ſentiment and expreſſion, we tranſcribe from one of his letters to a Noble Lord in this country; and a paſſage from another, written 22d April 1793, when moderation was leaſt to be expected, is worthy of the higheſt approbation: "To be little heard of in the great world of politics, in the words of your Lordſhip's letter, are expreſſive of my ſentiments; and I believe it is the ſincere wiſh of United America, to have nothing to do with the political intrigues, or the ſquabbles of European nations; but, on the contrary, to exchange commodities, and live in peace and amity with all the inhabitants of the earth." And again, that great and good man, when he put the laſt hand to the Federal Union, expreſſed himſelf thus: "The foundations of national policy muſt be laid in the pure and immutable principles of private morality; ſince there is no truth more thoroughly eſtabliſhed, than that there exiſts, in the economy and courſe of nature, an indiſſoluble union between virtue and happineſs, between duty and advantage, between the genuine maxims of an honeſt and magnanimous people, and the ſolid rewards of public proſperity and felicity; ſince we ought to be no leſs perſuaded that the propitious ſmiles of Heaven can never be expected on a nation that diſregards the eternal rules of order and right, which Heaven itſelf has ordained; and ſince the preſervation of the ſacred fire of liberty, and the deſtiny of the Republican model of Government, are juſtly conſidered as deeply, yet perhaps finally ſtaked, in the experiment entruſted to the hand of the American people."

Thus far, regarding the public character of this illuſtrious man. As a private citizen and agriculturiſt, he was amiably diſtinguiſhed in all their relations. He held 8000 acres in

his own management at Mount Vernon; his black people never felt the chains of bondage; and his deeply ſagacious plan was, by education and time, to render them capable of citizenſhip and freedom. Great difficulty he had to encounter in the cultivation of his land, where tenantry is almoſt unknown; but he performed much more than could have been expected; and his laſt aim, in correſponding with the Noble Lord already alluded to, was to create a free tenantry in America, upon the moſt liberal principles of unfettered meliorating leaſes, with a rent to be eſtimated according to the value of the fruits of the earth.

"His ſaltem accumuler donis et fungar inani munere."

January 1800.—At Airfield, in the pariſh of Cranſton, county of Mid-Lothian, aged 76, Mr THOMAS RENNIE, farmer there.

Mr Rennie poſſeſſed one of the Long-Niddry farms upon the Seton eſtate, for more than 40 years; and, among a number of eminent farmers in his neighbourhood, was diſtinguiſhed for rural knowledge, and aſſiduous attention to the different branches of operative huſbandry. When the York-Buildings Company ſold the eſtate in 1779, and the tenants were generally removed to make room for a new ſet of poſſeſſors, Mr Rennie took a leaſe of Airfield farm from Sir John Dalrymple, Bart.; which farm he rapidly improved in a ſuperior ſtyle.

Mr GEORGE RONALDSON, farmer at Dodridge, in the county of Eaſt Lothian.

At Weſt Walton, county of Norfolk, Mr N. COKER, farmer and grazier.

At Inkborough, county of Worceſter, HENRY DAVIS, a labourer. He was born in 1699; and, during the long period of his exiſtence, had lived the quiet and peaceable life of an ancient Engliſh huſbandman. He was particularly ſkilful in the art of grafting trees; and, at the age of 96, purſued his occupation with vigour and activity.

At Aſhton, county of Suffolk, Mr ROBERT POOLE, a reſpectable farmer.

At Bliſthorpe, Nottinghamſhire, Mr FLINT, farmer there.

At Thirleſton, near Whittingham, Northumberland, Mr RALPH BOLOUR, an eminent farmer.

At Yeaverin, Mr WILLIAM ATKINSON, a warm friend to agricultural improvements.

FIARS OF GRAIN IN SCOTLAND—CROP 1799.

Wigtonſhire.

	L.	s.	d.		L.	s.	d.
Oat meal -	2	16	0	Beſt beer -	2	5	0
Farm meal -	2	8	0	Farm beer -	2	0	0
White corn -	2	0	0	Malt - -	2	15	0
Mixed corn -	1	15	0	Barley -	2	10	0
Grey corn -	1	5	0	Wheat, per quarter	3	12	0

All Galloway Meaſure.

Berwickſhire.

Wheat, per boll	1	17	4	Merſe oats -	1	9	0
Merſe Barley -	1	12	0	Lammermuir ditto	1	5	0
Lammermuir ditto	1	6	0	Peas - -	1	13	4
Rough beer -	1	5	0	Meal, 8 ſt. to boll	1	16	0

Lanarkſhire.

Beſt oat meal, per boll) - -	1	13	0	Second malt (duty included) -	1	8	0
Second ditto -	1	11	0	Beſt wheat -	1	17	0
Beſt oats (ſeed excepted) -	1	3	0	Second ditto -	1	14	6
Second ditto -	0	18	0	Beſt beer -	1	7	0
Beſt malt (duty included) -	1	14	0	Second dito -	1	5	0
				Beſt flour -	2	5	0
				Second ditto -	2	0	0

Stirlingſhire.

Oat meal -	1	10	0	Kerſe oats -	1	4	0
Wheat -	2	0	0	Dry-field oats -	1	3	0
Common malt -	1	10	0	Airſeed oats -	1	6	0
Kerſe beer -	1	7	0	Kerſe barley	1	10	0
Dry-field barley	1	6	0	Dry-field barley	1	9	0
Muirland beer -	1	0	0	Barley malt -	1	12	0
Peas and beans	1	8	0				

Clackmannanſhire.

Wheat, per boll	1	15	0	White Kerſe oats	1	4	0
Kerſe beer -	1	10	0	Dry-field oats	1	3	0
Dry-field beer	1	7	6	Black oats -	0	18	0
Muirland beer	1	2	0	Peas - -	1	6	0
Meal - -	1	8	6	Malt - -	1	12	0

Archbiſhoprick

Archbiſhoprick of Glaſgow.

	L.	s.	d.		L.	s.	d.
Meal, per boll -	1	16	0	Oats, per boll -	1	4	0
Beer ditto -	1	10	0				

Commiſſariot of Hamilton and Campſie.

Meal, per boll -	1	16	2	Beer, per boll -	1	6	3

Commiſſariot of Glaſgow.

Meal, per boll -	1	15	4	Beer, per boll -	1	5	6

Forfarſhire.

Wheat, per boll	1	15	9	Oats - -	1	1	10
Barley - -	1	4	3	Meal - -	1	8	8
Cheſter beer -	1	2	2				

Kincardineſhire.

Oat meal, per boll	1	9	0	Beer, without fodder - -	1	7	0
White oats, with fodder -	1	16	0	Peas, without fodder - -	1	10	0
Do. without fodder	1	4	0	Wheat - -	1	17	0
Beer, with fodder	1	10	0				

Elginſhire.

Wheat, per boll	2	0	0	Oats, 5 fir. to boll	1	6	0
Peas, beans, rye	1	6	0	Oat meal, 8 ſtone Dutch to boll	1	3	3
Barley or beer	1	6	0				

Ayrſhire.

Oat meal, per boll 8 ſtone -	1	8	0	Wheat, per boll, 4 buſh. Wincheſter	1	15	0
Beer, per boll, 8 buſh. Wincheſter -	1	15	0	White corn per boll, 8 buſh. ditto	1	8	0

Mid-Lothian.

Beſt wheat, per boll	2	0	9	Beſt oats -	1	9	6
Second ditto -	1	16	5	Second ditto -	1	2	0
Beſt barley -	1	13	1	Peas and beans	1	10	9
Second ditto -	1	9	5	Oat meal -	1	14	3
Third ditto -	1	7	0				

Eaſt-

Eaſt-Lothian.

	1.		2.		3.	
	s.	d.	s.	d.	s.	d.
Wheat,	43	9	40	9¾	34	8
Barley,	34	8	31	11	29	2
Oats, -	32	4½	28	7½	25	0½
Peas, -	38	1½	33	1½	28	6¼

The Eaſt-Lothian fiars are thought to be calculated with greater accuracy than thoſe of any other county in Scotland, being formed from the averages of the prices of grain actually bought or ſold by 70 or 80 of the moſt reſpectable corn-dealers and farmers in the county, with the addition of 2½ per cent. put by the Sheriff upon the price. The reaſon of this addition proceeded from its being anciently the cuſtom to ſtrike a ſecond fiars at Lammas; but, ſince 1678, to ſave that trouble, 2½ per cent has been added, which, it is ſuppoſed, in ordinary years, will compenſate for the riſe in markets during the Summer months.

The proof, which is taken upon oath by the Sheriff-depute of the county, includes the prices of a very conſiderable quantity of grain, and is in every reſpect conducted with great minuteneſs and regularity. As a number of the clergy receive their ſtipends according to the fiars, and rents in ſeveral caſes are paid in the ſame manner, it is a matter of importance to the county, that the ſcale of prices ſhould be juſtly aſcertained.

Notes to Correspondents.

The very intereſting and valuable *Rural Sketch of the County of Lancaſter* will appear in our next.

Extracts from Mr Wright's treatiſe on the *floating of land*, agreeable to the requeſt of our *Hawick Correſpondent*, ſhall be given. If his letter had come to hand in time, it ſhould have been preſented in this number. We will be extremely happy to hear from him afterwards.

If *S. A. R.* does not know whether or not to ſow his land with *flax-ſeed*, he is not a proper correſpondent for the Farmer's Magazine.—We ſuſpect this gentleman, however, to be more *rogue* than *fool*.

We are ſorry *W. C.*'s letter did not arrive ſooner, as it contains important information. An extract is given, and his future correſpondence requeſted.

We thank the worthy clergyman who has kindly informed us, where we can receive "*an authentic detail of the miſery of Scotland, occaſioned by the failure of the crops* 1697-8-9" which ſhall be attended to.

Mr *Bakewell's Memoirs* are delayed, in expectation of ſome additional materials from England.

The review of Rochefoucault's Travels, Vol. II. is unavoidably poſtponed, together with ſeveral other articles.

THE

FARMER'S MAGAZINE:

MONDAY, 14. JULY 1800.

(No. III.)

PART I.

ORIGINAL COMMUNICATIONS.

FOR THE FARMER'S MAGAZINE.

The Rural Inquirer, No. 2.

Certainly we are all afraid leſt our plenty ſhould be our ruin, or elſe men that ſtudy ſo much to get eſtates at ſecond hand from one another, would rather ſtrive to get them at firſt hand out of the earth.

Blythe's Improver improved.

A NOBLE Engliſh Peer, at a late public meeting, (as we are informed by a reſpectable correſpondent), hardily declared, that the modern agricultural improvements, inſtead of being beneficial, had proved injurious to the public welfare. 'What,' ſaid his Lordſhip, 'have not rents riſen ſince waſte lands were generally cultivated? Have not proviſions of all kinds increaſed in price? and has not ſtock, *i. e.* cattle and ſheep, equally advanced?' The company ſilently heard his Lordſhip, and thereby tacitly acknowledged the juſtice of his obſervations.

We have often obſerved, with ſurpriſe, the averſion of the generality of landed proprietors to the diviſion and incloſure of waſte lands, without being able to trace it to any well founded cauſe. Perhaps ſentiments ſimilar to thoſe avowed by this noble Peer, may have influenced their conduct, and contributed to fix ſuch immenſe tracts of the national territory in their preſent unproductive ſtate. This, in fact, is

the moſt charitable reaſon that can be aſſigned, for their oppoſition to meaſures of ſuch obvious utility. If meliorating and improving the waſte lands were neceſſarily ſucceeded by ſuch miſchievous conſequences, undoubtedly they ought to remain as they are, or be effaced from the map of Britain, as containing matter within them deſtructive to the public intereſt.

But as we do not view the ſubject in the ſame light with his Lordſhip, and conſider a large moiety of the waſte lands ſuſceptible of material improvement, we look upon an increaſe of proviſions as an important branch of political economy.—Under theſe impreſſions, we ſhall ſeize upon his Lordſhip's ſpeech for the ground-work of this Number, and endeavour to make up for the deficiency of his friends.

We admit, at once, that the rent of land has greatly riſen, and that the price of every article of proviſions has alſo increaſed, notwithſtanding the extenſive improvements that have taken place, within the period of fifty years, over every part of this iſland; but it would be abſurd to ſuppoſe, that, under this admiſſion, theſe circumſtances were produced by the cultivation of waſte lands, or by the ſuperior attention now almoſt univerſally beſtowed upon the cropping of the ground; which, in fact, includes all that goes under the name of modern improvements. The proportion of the waſtes, formerly unproductive, but now brought into a condition for carrying crops of corn and artificial graſſes, has moſt aſſuredly augmented the quantity of proviſions; and this quantity could not be leſſened by the ſuperior attention now paid to dreſſing and cropping of the old arable fields: the reverſe muſt neceſſarily have been the fact: and if the circumſtances of the country, *in other reſpects*, had remained as formerly, or if improvements had kept pace with the increaſe of luxury, and the increaſed numbers of the people, it is apparent, that as the means of ſubſiſtence were ſo conſiderably augmented, their value would conſequently have ſuſtained a great diminution.

Three cauſes have occurred, which effectually prevent improvements from producing a reduction of the price of proviſions; theſe are, the increaſe of luxury, the increaſe of population, and a diminution in the value of money. The two firſt are real preventives; the laſt may be conſidered as merely nominal; at leaſt, ſo long as the value of labour bears an affinity to the ſcale of prices at which the neceſſaries of life can be procured.

To

To a perſon in the leaſt degree acquainted with the ſtate of Britain in former times, the great difference in the mode of living among the majority of the people, would be a ſatisfactory inſtance, that a much greater extent of produce is now required to ſupport an equal population, than what was neceſſary even within the ſhort period of our remembrance. In the *firſt* place, The demand for butcher meat is at leaſt twice as great as it was twenty years ago: this is confirmed, not only by general obſervation, but by the ſales in the different markets, as well as the ſuperior weight of the animals therein expoſed. This increaſed demand has occaſioned a greater quantity of land to be thrown into paſture than formerly; under which ſyſtem it is evident, that a given ſpace of land will not maintain one half ſo many people, as when employed in producing corn crops, and eſculent roots. 2*dly*, The increaſed number of pleaſure horſes, and thoſe employed in hired carriages, ariſing from the growing proſperity of the country, occaſions a conſumption of much grain; which in former times, would have gone to the ſupport of the people.

Hence it appears, that a greater ſpace of ground is now required, not only for ſupporting the number of cattle and ſheep adequate to the ſupply of the markets, but alſo for producing corn, ſo as the crops may be equal to the average demand. Had luxury arrived at its preſent height, without being preceded by an increaſe of culture, it is demonſtrable, that the produce of the country, even in the beſt years, could not have ſupplied three fourths of the preſent extenſive demand.

An *increaſed population* is the ſecond cauſe which has prevented improvements from reducing the price of proviſions. Upon this point, we are well aware, that ſeveral political writers entertain ſentiments unfavourable to this opinion; and that it is ſcarcely poſſible to remove their objections, without an actual numeration. This has already taken place in Scotland, though perhaps not ſo correctly, in many inſtances, as could be wiſhed; and the reſult fully confirms the general ideas formed by us upon the ſubject. But, to ſpeak to the population of Britain. To whatever quarter we turn our eyes, we ſee an increaſe of trade, an increaſe of manufactures, and an increaſe of ſhipping for carrying on the coaſting trade, and tranſporting our commodities to foreign markets. We diſcern public works of every kind going briſkly forward, while a greater number of ſailors and ſoldiers are

employed in the national ſervice, than in any former war. Notwithſtanding the immenſe numbers thereby taken from ordinary labour, no ſcarcity of hands is diſcovered for executing the moſt extenſive territorial improvements; but every thing goes on as if the preſent was the moſt peaceable æra. When we compare theſe things with what actually happened during the American war, when labourers could not be procured, when foreign ſailors navigated our merchant veſſels, when the navy could not be manned, and when our army was conſtantly non-effective: We ſay, when we make ſuch a compariſon, the warrantable concluſion muſt be, that the population of Britain has of late rapidly increaſed, and that its progreſs has been uniform and ſteady, ſince the concluſion of the unhappy and unfortunate war with our ancient colonies.

Again, the alteration in the value of money has prevented improvements from reducing the nominal price of the neceſſaries of life; we ſay, the nominal; becauſe, if a man will not give as much labour for ſixpence as formerly, he is not entitled to receive the ſame neceſſaries for that ſum as he formerly procured. It is evident that proviſions have been lower, upon an average, during the preſent century, when compared with the value of money, (laying aſide their rate at this diſtreſſing period, when a ſcarcity, unparalleled in the annals of our hiſtory, prevails, which, by the by, would have been greater without improvements), than for the century preceding. We know no better rule for aſcertaining this matter, than a comparative view of the price of bread during each century, with the wages earned by the labourer or manufacturer, during the ſame period. Such a compariſon will ſhew, that the latter, in the courſe of a century, has advanced full as much as the former; conſequently, that the rate of rents, proviſions, ſtock, &c. ſagaciouſly ſtated by the Noble Peer at the meeting alluded to, as an objection to agricultural improvements, is merely imaginary; and that, in ordinary years theſe things will conſtantly bear an affinity to each other, if left to find their own level.

The diviſion and incloſure of common fields and waſtes, from the number of incloſure bills paſſed in Parliament, have perhaps increaſed the quantity of productive land in the kingdom, at the rate of a quarter *per cent. per annum*, for fifty years back; in other words, the land now in condition for carrying crops of corn and graſs, exceeds what was in that ſtate in the year 1750, at the rate of 12½ *per cent.* If we add to this, the augmentation

augmentation of produce arising from a superior cultivation, which may safely be calculated at the same extent, it will appear that Britain now produces one fourth more food for man and beast, than it did fifty years ago.

Now, if these improvements, so much complained of by the Noble Lord in question, had not been made, what would have been the inevitable consequences? Precisely these: either one fourth of the inhabitants would have been obliged to emigrate, or a quantity of provisions, equal to what is gained from the modern improvements, must have been imported from other countries, at an expence greater than the balance of trade in favour of Britain could possibly defray, and which in time would have impoverished the country. Under present circumstances, it is obvious, that a still greater portion of waste land ought to be brought into a state of cultivation, to meet the progress of trade, luxury, and population: and we venture, without fear of contradiction, to affirm, that whenever this extent of improvement accomplishes a depreciation of rents, or reduces the price of provisions below their ordinary level, that then the prosperity of Britain is on the decline; that trade and manufactures have met with a check; and that population is decreasing, from a want of employment to the usual inhabitants.

We have, in this Number, deviated from the line marked out in our first Paper; but before we described the different modern improvements, we thought it absolutely necessary to ascertain, whether or not these improvements contributed to promote the real welfare and prosperity of the country with which we are connected. R.

FOR THE FARMER'S MAGAZINE.

A Rural Sketch of the County of Lancaster.

"Tempus in agrorum cultu consumere dulce est." OVID.

It is easier to submit to the toil of travelling, than to turn travels to solid advantage. An intelligent, industrious mind, can never be a loser by a change of place and circumstances. Much individual profit may be reaped, yet little

may be added to the ſtock of public utility. Many of our modern touriſts, amidſt a multitude of pages, do nothing more than perform the part of triflers; they unhappily abound in verboſity of manner, to the neglect of unfolding ſtores of ſenſe, and intereſting occurrences, to the eye of the world; perhaps from a perſuaſion, that man ſeeks, at times, to be amuſed in the foreſt, no leſs than to be ſeriouſly employed in the fertile field.

During a reſidence of three months in Lancaſhire, a multitude of diverſified obſervations were made, and ſhall be detailed without order or partiality, freſh and glowing as they were written on the mind.

Lancaſhire is one of the leading counties of England, meriting regard, not ſo much for extent of ſurface, as for the degree of population, and the active ſpirit of the inhabitants of all deſcriptions. According to the lateſt calculations, it claims 425,000 inhabitants, and 1,129,600 acres *. Notwithſtanding a late prodigious decreaſe of people, Lancaſhire appears ſtill to be inferior in population to Middleſex only.

A traveller is ſtruck with ſurpriſe and ſorrow, to obſerve ſo extenſive, delightful a diſtrict, in an uncultivated condition, decked with invariable green. The love of paſturage prevails. Agriculture, the mother of a thouſand conveniences and comforts, though not deſpiſed, is much neglected. The whole tract of land, low and fertile, is favourable to aration; but few fields are allowed to ſuffer or to enjoy the preſſure of the plough. It is not by proper periodical tillage, but rather by perpetual reſt given the grounds, that riches are expected. A park is covered with corn once in twelve years, or ſeldomer, if the old graſs is not ſo deteriorated as to be unfit for paſture.

Manufactures and commerce completely triumph over agricultural purſuits. The factory brings more money than the farm. All the ingenuity, the zeal, the perſeverance of man, are vigorouſly exerted to invent or perfect various arts of life; while the firſt, the ſimple art of operating on the ſoil, obtains tranſient attention. The ſame perſon cannot, at the ſame moment, both navigate the ocean, and cultivate the earth. Put Mancheſter and Liverpool together, you form another London. United, they may be conſidered not leſs the emporium of the weſt, than the metroplis is of the eaſt of Britain.

The

* Middleton's Review of Middleſex.

The ſituation of Lancaſhire boaſts of advantages, ſuited to the views of manufacturing and commercial men, which few countries poſſeſs. Mines of coal and fountains of water, navigable rivers and numerous canals, found everywhere, invite enterpriſing individuals to form a ſettlement. Waſhed by the ocean for many miles of coaſt, Lancaſhire can export multifarious ſuperfluities, and receive in return all the articles, that neceſſity, curioſity, cupidity, or caprice, can demand. External intercourſe with foreign nations is eaſy; internal navigation is commodious. A nobleman of immenſe fortune *, an example to all of the ſame high order, devotes his attention to trade; and, by means of a canal of his own, ſtretching at leaſt forty miles without a ſingle lock, covered with veſſels of various ſizes, moving in different directions, facilitating interior communication, increaſing the general proſperity, carries on an extended lucrative buſineſs. The induſtry of the people, greatly favoured by nature, nouriſhed by the countenance of ſuperiors, is diſplayed and manifeſted, not in raiſing rural productions, but in working up raw materials.

The exiſtence of *tithes* is an effectual obſtruction to all rural improvements. The farmer will not ſow, when the clergyman reaps. If a cultivator, of inferior capital, can avoid a partial, oppreſſive, odious ſyſtem, as is that of taking tithes; if, by a different mode of management, he can lawfully prevent a ſtranger from devouring a tenth of the fruits of his labours; if he can ſecure to his family an excluſive right to all the advantages his induſtry hath acquired, how can he be blamed? What does he do more than every other man would attempt? Chriſtianity, with all its able, eloquent, faithful, public advocates, ought to be ſupported, but never by the oppreſſion of a particular claſs of reſpectable, induſtrious citizens. The patron ought to be made reſponſible with his own funds, whenever a clerical man is impoſed on a pariſh, in direct violation of the beſt inclinations, the acknowledged rights, the nobleſt intereſts of the people. There are many neglected ſtarving curates in England; but, if the lands are always unſown and unreaped, the writer ſhould not be ſurpriſed to ſee ſtarving vicars too, and rectors who could no longer afford to ſpend their uſual pleaſurable months at Bath. Tithes produce two unhappy effects, creating a rooted averſion to a national church, and depreſſing the ſpirit of agricultural adventurers. A mind

* The Duke of Bridgewater.

inflamed by animofity, exafperated by prejudice, will fuffer the beft fields to be overrun with brambles, rather than contribute, by conftraint, to an obnoxious tax, impofed to fupport the clergy. While the intolerable fyftem is not difcontinued, we may expect to fee agriculture declining, corn decreafing in quantity, enhanced in price; feafons of fcarcity periodically returning, and our country left to the mercy of foreign markets. The tithe-laws and the game-laws are enormous national evils, that cannot be too fpeedily abolifhed.

The fhambles of Lancafhire demand immenfe fupplies, arifing from the increafed crowded population, operating in favour of grafs more than of corn. The extravagant price of provifions in February, were equally unprecedented as in North Britain, irritating the paffions of the multitude, and producing, in various places, the moft tumultuous affemblages. Several of the leaders have been apprehended, imprifoned, and muft ftand trial at the affizes in Lancafter.—The rent of land in the immediate vicinity of Manchefter is fix guineas an acre. A..

FOR THE FARMER'S MAGAZINE.

Letter from a Scots Farmer, during a Tour through England.

LETTER III.

My laft having concluded with our arrival in the capital of the Britifh empire, I fhall now endeavour to give you a hafty detail of the various circumftances that came under our obfervation during the few days we remained in that overgrown city.

The firft thing that ftruck my attention, upon iffuing from our lodgings, was the immenfe multitude of people, poffing along as if they were walking or running for wagers, and the great throng of carriages of all defcriptions which filled every ftreet. Cuftom, or law, has, however, ordered thefe matters fo well, that the greateft regularity is conftantly preferved. By taking one line, the foot-paffengers upon

upon the pavement follow each other like ſoldiers upon a march, while thoſe going in a contrary direction, by following the ſame rule, paſs on without the ſmalleſt interruption. In the driving of carriages, the ſame plan is ſtrictly adhered to, it being no uncommon matter to ſee the *Strand* filled with two lines of machines from the one end to the other.

Here it may not be improper to ſay a few words concerning the admirable police maintained in London, which is infinitely ſuperior to that of any other city in the kingdom. I had recently peruſed Colquhoun's treatiſe on that ſubject, and certainly had formed very different ideas from thoſe afterwards realized by obſervation and experience. During the time of my reſidence, I did not diſcern the leaſt inclination to rioting or breaking the peace; and the ſtreets, at night, were as quiet and undiſturbed as thoſe of our northern metropolis. In this reſpect, as well as in many others, London holds out a pattern to other great towns, where, though the population is infinitely leſs, their police is much more defective.

After ſauntering through the ſtreets at the weſt end of the town, examining Weſtminſter-Abbey and other public buildings, we arrived at St James's palace, juſt in time to ſee the King ſtep out of his carriage at the gate. His Majeſty is a ſtout healthy man, of a florid countenance, rather corpulent; but as he takes a great deal of exerciſe, we have every reaſon to hope that he will long be preſerved in this world, *as a bleſſing to his ſubjects, and a ſafeguard to the welfare and happineſs of Europe.*

Paſſing by the public office in *Bow-Street*, we ſtepped in, and had an opportunity of witneſſing the celebrated Mrs Jane Gibbs lodge her accuſation againſt a decent-looking man at the bar, for robbing her in Kenſington-gardens. She appeared unconnected in her depoſition; and, notwithſtanding every exertion of the magiſtrates, could not be kept to the point during the examination. Charitable people attributed the eccentricity of her behaviour to the agitation of mind occaſioned by ſuch a public appearance; and the magiſtrates, after making every attempt to aſcertain the truth, were under the neceſſity (the accuſer's character being then unknown) of committing a man for trial, who was in reality innocent.

As all the world flocked at that time to ſee *Sheridan's Pizarro* at Drury-Lane, we of courſe followed the multitude, and, with difficulty, procured acceſs. *Barrymore*, who filled

filled the character of Pizarro, was the beſt picture of a villain I ever witneſſed, and did ſtrict juſtice to his part. Upon the whole, what occurred to me, upon ſeeing this popular repreſentation, was, that a great deal of its ſucceſs was owing to the painter and tailor: indeed, the ſcenes and dreſſes were excellent. Rolla's famous ſpeech to the Peruvians favoured much of bombaſt and declamation: perhaps, the nature of the times has given a degree of currency to this and ſeveral other paſſages, which might otherwiſe have been received, without ſuch extraordinary marks of applauſe.

We obſerved, with much ſatisfaction, the great diſpatch uſed in the courts of law, which, if imitated in Scotland, would inevitably beggar three fourths of the profeſſion. In the Court of Common Pleas, during the ſhort ſpace of a ſingle hour, we ſaw a cauſe of conſiderable importance determined, and a freſh Jury put into the box. Every attention ſeemed to be paid to the buſineſs by the Judge (Sir Giles Rooke), by the Counſel on both ſides, and by the Jury. The ſeveral forms of opening the cauſe, examining five or ſix witneſſes, charging the Jury, &c. were gone through in leſs time, than would have been taken in ſome other Courts to determine upon the previous point, viz. the relevancy of the indictment.

It was our good fortune to be in London when the King inſpected or reviewed the volunteer corps, (any of theſe terms are equally applicable); and as ſuch a ſight in the city was novel and extraordinary, the public curioſity was awakened to the uttermoſt. The police, as uſual, took every ſtep to prevent diſorder; and the principal ſtreets through which his Majeſty was to paſs, were covered with ſand in the courſe of the preceding night, while barricadoes were erected at the different entrances, to prevent carriages from paſſing—a very neceſſary precaution. His Majeſty being to enter from the Surrey ſide, by Blackfriars Bridge, we went over early in the morning to Sir Aſhton Lever's muſuem, where, from a balcony, we had a full view of the Royal Family, and their attendants. I muſt premiſe, that the proceſſion came up at a *hard* gallop or canter, a detachment of the horſe-guards clearing the way; next followed the King, upon his white charger, with the Duke of York on his right, and Kent on his left, attended by a great number of general officers, while another detachment of horſe-guards cloſed this part of the proceſſion. Behind, were

were a mixed multitude of all deſcriptions, whipping, ſpurring, and driving on at full ſpeed, without the leaſt order or regularity. In ſhort, I could compare this part of the proceſſion to nothing elſe than your holiday hempies, who ſcamper along the back-ſands at Leith races, during the interval between the heats.

At Blackfriars Bridge, the King was met in ſtate by the Lord Mayor, Sheriffs, and other officers of the municipality; but his Lordſhip's horſe was badly trained for facing ſuch a numerous aſſemblage. We followed as faſt on foot as we were able; but, as it was impoſſible to keep up with his Majeſty, we proceeded no farther in that direction than Leadenhall-ſtreet, which was filled with the Eaſt India volunteers. Learning that the chief exhibition would be in Finſbury-ſquare, we made the beſt of our way to that place, which was crowded with troops and a multitude of people, while the windows of every houſe were occupied by the female ſex. We forced our way up to the head of the ſquare, where the proceſſion was to enter; and, by getting hold of the baluſtrades, I had the fineſt view imaginable. Figure to yourſelf a vaſt body of troops drawn up in the ſquare; freſh bodies conſtantly marching along the ſtreet, while the ſcene was enlivened by numerous bands of martial muſic, and the loyal huzzas of an immenſe multitude. The weather, which, in the morning, was but lowering and dull, now changed for the better: the ſun ſhone bright, and a gentle breeze prevented the heat of the place from being diſagreeable. Under theſe favourable circumſtances, his Majeſty entered the ſquare, and was received with ſuch burſts of applauſe, as could not fail to animate his royal breaſt with the moſt delightful and grateful ſenſations. Thouſands of white handkerchiefs in an inſtant were waved from the windows, while the ſpectators below teſtified their heartfelt joy by repeated and general acclamations. The King immediately took off his hat, and bowed to the people; and, during his march round the ſquare, (which was conducted with great deliberation), was joined by the Prince of Wales, at the head of the Artillery-company of the city, who afterwards rode on his Majeſty's right hand: the proceſſion then went on to the Lord Chancellor's, where the Royal Family breakfaſted, inſtead of taking that refreſhment at the Bank, as was expected by the Directors. Satisfied with what we had ſeen, we returned to our lodgings.

His Majeſty appeared to great advantage upon this occaſion, as he is an excellent horſeman; and, what is more to his credit, the warm and grateful reception which he uniformly experienced, evidently affected him in a feeling manner. John Bull himſelf was highly delighted with the great honour of this viſit—an honour never beſtowed upon him by any of the preceding Sovereigns. It was curious to hear the converſation in the ſtreets: "What do you think," ſays a worthy citizen to his friend, "of the King's goodneſs? He abſolutely took off his hat to my Lord Mayor at Blackfriars Bridge." "Did he indeed!—Oh, he is a fine fellow—huzza!!!"

We underſtood, it was paſt five o'clock before the whole affair was over; and a fatiguing one it muſt have been to thoſe immediately concerned. Our friend —— of the St. Martin Le Grand volunteers, aſſured me next day he was quite exhauſted before they were diſmiſſed, having been upon the ground in Hyde Park from 8 o'clock A. M. without any refreſhment. The error lay in calling out the corps in the weſt end of the town ſo early; for a very ſmall degree of foreſight might have taught the commanders, that the previous proceſſion would conſume a good deal of time.

The buſineſs of the day has confirmed my opinion of the goodneſs of the London police; for I did not hear of a ſingle accident having happened; nor did the leaſt degree of confuſion prevail in the ſtreets, further than what might naturally be expected from ſuch a concourſe of people. The erecting of barricadoes was an excellent preventive, and the covering of the ſtreets with ſand, proved of much utility. In a word, the day paſſed over in the moſt agreeable manner; and, at the concluſion of the buſineſs, the multitude retired peaceably to their homes, without kicking up a duſt, as is commonly the caſe in a certain city upon public rejoicing days.

Let me now ſay a few words upon agricultural ſubjects.—I thought it but the leaſt I could do, to pay my reſpects to the noble Preſident of the Agricultural Board; and, to ſpeak in a court figure, was moſt graciouſly received. His Lordſhip, after talking a little upon general points, inquired if I was acquainted with the Kentiſh huſbandry (wheat and beans alternately), as he wiſhed much to have it generally introduced. I replied, that ſuch a ſyſtem undoubtedly deſerved ſerious attention upon the ſoils calculated for producing theſe grains; but that I had good cauſe to believe, that the ſtricteſt

care

care beſtowed upon the working of the land, could not prevent Summer fallow from being neceſſary, as the ſeed furrows, for both crops, were generally given at a period of the year, when the ground was not in the moſt favourable condition for receiving benefit; though I had not a doubt, but that, if the beans were ſufficiently cleaned, the line or courſe of crops might thereby be extended, providing the ground was duly manured. His Lordſhip then mentioned, that he thought, in the bean huſbandry, the intervals of the drills ſhould not exceed eighteen inches; and that a hand-hoe, invented by the celebrated Mr Ducket, which, in the hands of a woman, was capable of cleaning one acre per day, was the beſt inſtrument to be uſed. I remarked, that cleaning an acre per day by one hand, was an uncommon circumſtance; as three women would hardly, in that time, go over an acre of turnips, which were generally raiſed upon ſofter ſoils, and had received a greater extent of culture; and that, with ſubmiſſion, I was of opinion, if beans were meant to be raiſed upon the great ſcale, that no mode of working them was equal to the horſe-hoeing huſbandry, under which the buſineſs was performed at leſs expence, and in a completer ſtyle, than it was poſſible to execute upon loams and clays by hand-work. His Lordſhip referred me to the office for a ſight of Mr Ducket's hoe, which, he politely obſerved, would contribute to produce a change in my ſentiments.

His Lordſhip appeared to poſſeſs a good deal of information reſpecting practical huſbandry, and diſplayed a degree of keenneſs when diſcuſſing the different ſubjects which occupied our converſation.

I next went to the office, but was ſorry to learn that the bean-hoe was returned to Mr Ducket, for ſome neceſſary alterations; ſo my prepoſſeſſion in favour of the horſe-hoeing ſyſtem continues unremoved. The clerks very civilly ſhewed me the innumerable models of huſbandry implements belonging to the Board, which, if preſerved from deſtruction, will, in a couple of centuries, prove an immenſe gratification to the antiquarian.

I have been out at our friend —— in Hertfordſhire, who has a ſnug little box, and a ſmall property in that county. He keeps the latter entirely in graſs, which certainly ſaves him a deal of trouble; and I do not think profit ſeems to be his object. The Hertfordſhire plough, for ſtrength and ſize, exceeds every inſtrument in the kingdom for breaking up ground: our old Scotiſh plough is but a child, in compariſon with

with this giant. Five horſes are uſually employed in the draught; and yet, ſtrange to tell, the furrow we ſaw did not exceed four inches in deepneſs! I have ſeen land ploughed full deeper with one horſe.

I ſaw an excellent mode of putting up a hay ſtack, which, I think, deſerves to be generally known. I need hardly tell you, that they beſtow much more pains, in the vicinity of London, to win hay green, or in the ſap, than is cuſtomary with us; and they are right; for, by letting it remain uncut till the blade is hardened, or the moiſture nearly exhauſted, the value of the herbage is leſſened, and the land injured. To preſerve the juices, it is cut very early, perhaps a fortnight ſooner than we would think it ready for the ſcythe; it is put into ſmall cocks as faſt as poſſible, and ſtacked with all convenient ſpeed. The mode of ſtacking which I ſaw, was this.—Two large poſts were perpendicularly erected, at a diſtance from each other, equal to the length of the intended ſtack; a croſs beam was laid, ſtretching from the one poſt to the other, upon which a large ſail or canvas was hung, intended as a covering to the ſtack during the time of building; and the hay was brought in ſmall quantities, according to the ſtate of the weather, or the degree of winning it had received. By this means, whenever any part was got into condition for keeping, it was inſtantly ſecured, while the ſtack was preſerved from injury, by the cover or umbrella which hung above it. Another important circumſtance was, that very little treading was required, as the ſtack ſettled gradually, and by this means was not expoſed to an *over-ſweat*, which is highly deſtructive to all graſſes, particularly thoſe of the meadow or natural kind. In ſhort, this mode appeared to me one of the beſt that could be deviſed for winning and preſerving hay, in our variable and unſettled climate.

You may believe, that Smithfield and Marklane would engage my attention in a particular manner. Such a number of beaſts, ſheep, lambs, calves, and ſwine, were preſented in the former for ſale, that the firſt thought which occurred to the mind was, Where will people be found to eat you all? The market is conducted with ſurpriſing regularity; there not being one half of the confuſion uſually attendant upon our petty county fairs, where the fiftieth part of the buſineſs is not tranſacted. The beaſts are all tied up by the head to ſtrong rails, and arranged in a line according to their ſize, and, in many inſtances, according to their reſpective breeds; which facilitates buſineſs very much. The ſheep, &c. are all

all encloſed in hurdles: in a word, the police of the market is managed with the greateſt judgment and regularity.

The corn exchange in Marklane is a buſy place, where almoſt as much noiſe prevails as in your Outer Parliament Houſe. This is a ſample market, where the grain is ſhown in ſmall bags, about a peck each, placed upon tables, for the inſpection of purchaſers; but the fact is, the place is too ſmall for ſuch extenſive dealings.—Many of the ſamples that I examined, were of inferior quality, and far from being well dreſſed, particularly thoſe of wheat and oats, the laſt of which were generally exceptionable. The beans were of excellent quality, much ſurpaſſing any we have in Scotland, which I attributed to their being raiſed and harveſted under the influence of a hotter ſun.

It is ſurpriſing how adroitly the horſes are managed in the large drays, and other carriages uſed in the ſtreets of London, without a hand being laid to the rein, but all executed under the influence of the whip and the voice. No fewer than four powerful horſes are ever yoked in a team; and they all go in a line with wonderful ſteadineſs. I have ſeen them take a turn into a narrow lane, where the carriage had ſcarcely room to move, without more pains being uſed by the driver, than would have been required with one of our ſingle-horſe carts.

It is unneceſſary to trouble you with a deſcription of St Paul's Cathedral, the Tower, and other public places which we viſited, as theſe ſubjects only afford a repetition of what has been ſaid a hundred times before. The wharfs are ill calculated for carrying on the trade of the emporium of the world, being little better than large back doors into the warehouſes where goods are depoſited. We heard with ſatisfaction, that ſeveral plans were in contemplation, for rectifying theſe defective accommodations, which, like every other mode of improvement in this country, has been ſelfiſhly oppoſed.

We are juſt going to ſet out upon our homeward route, which we take through Eſſex, Suffolk, Norfolk, &c. As theſe eaſtern counties are ſeldom viſited by Scotiſh travellers, I hope ſomething at leaſt new will occur in our progreſs, which, if it does not add to your ſtock of knowledge, may contribute to your gratification and amuſement. I am, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Flax Husbandry.

GENTLEMEN,

THE culture of Flax is such an important branch of the rural economy of Britain, that I can hardly help expressing my surprise at its being hitherto so much neglected. It is evident, that a considerable proportion of our soil is naturally well calculated for the production of this article, which is the foundation of one of our first and most valuable manufactures: and it is truly wonderful, while immense sums have been annually, for a great space of time, transmitted to the Continent, for the purchase of a commodity which cannot be wanted, that we should not arrange our own economy in such a way, as to produce a quantity necessary for supplying the home manufacture. This surprise will be augmented, when it is considered, that facts fully ascertain, that seed of a proper quality can not only be raised upon our own fields, but also, that flax, of sufficient strength and fineness for every branch of the linen manufacture, may be produced; which, consequently, if the different processes of management were properly attended to, could not fail to be succeeded by the most important national advantages.

I am aware, that the generality of farmers look upon flax as a robber, and, consequently, consider its growth as injurious to British agriculture. I humbly believe, that, in one respect, the opinion generally entertained will not be supported by facts; for, if flax is pulled at a proper period, that is, when the seed has not arrived at maturity, it is not severer to the ground than any of those classed under the head of leguminous crops, and less so than a white crop of corn. I acknowledge, that a field under flax gives no return of dung to the farmer for that year; but still, under this acknowledgment, the culture of the article is not more deteriorating than where hay is raised, without being consumed on the premises. After all, so much of our meadow and richest lands may be employed in producing flax, without any perceptible diminution of the quantity of dung required for the arable fields, that I can be under no difficulty in maintaining, that a quantity sufficient for supplying the consumption of the country, may be raised at home, without affecting

affecting the value of the soil, or lessening its productive powers.

It may be argued against this, that the experiment has already been tried, and that, even with the aid of public bounties, the cultivation of flax has not arrived at perfection, nor has the quantity increased much for a great number of years. I acknowledge the force of these objections; but am not so ready to yield the principal point, viz. that our lands are not capable of producing what is requisite for supplying our own manufactures; and that the growth of the article may be extended with advantage to the farmer, without hurting his fields in a perceptible manner. If these things be conceded, I humbly apprehend, that the want of success hitherto, must be attributed to a defect in the general management, and to several prejudices which have operated against the extension of this branch of rural economy.

I am happy to notice my sentiments respecting the value of British flax, fully corroborated by the writer of a letter herewith transmitted to you; and, I believe, his remarks upon the subject are applicable to the practice of nine tenths of Britain, so far as concerns the culture, growth, and after management of flax. An appendix is also sent you, which shows the great national advantages attending the growth of this article. These papers were received from Sir John Sinclair, Baronet, to whom Britain lies under innumerable obligations.

One thing more, and I am done. If, at any period of our history, the raising of flax was deemed of importance to Britain, it now deserves a greater degree of attention than ever, for these reasons:

1. On account of the increase of our manufactures, which require a greater supply.

2. On account of the uncertainty of procuring the usual supplies from foreign countries.

3. On account of the promising appearances of the flax-mills for spinning, which are brought to such perfection as to admit a greater extension of the linen manufacture, consequently will require a great deal more of the raw article; and British flax is the best adapted for mills, of any I have seen. I am, &c.

Your, &c. N.

Extract of a Letter from a Linen Manufacturer, to Sir JOHN SINCLAIR, *Bart.*

Dated May 11. 1795.

SIR,—Were an apology neceſſary for the trouble this may occaſion, I ſhould be much at a loſs how to make one, that could be accounted proper; but as there can be no offence in communicating a few hints, reſpecting the improvement of any production of the earth, more eſpecially thoſe of our native ſoil, I forbear offering any apology for the liberty now taken.

Nor can I ſuppoſe the conveyance of ſuch hints, confirmed by practical experience, will be the leſs acceptable for being expreſſed in language familiar to thoſe who are bred to cultivate the ſoil, whoſe ideas and converſation, like their daily labour, have nothing to recommend it but ſimplicity and antiquity; for, in every other reſpect, their ideas and converſation are, in general, the leaſt improved of any deſcription of men in the empire, and to theſe they adhere with as much obſtinacy as they do to their antiquated cuſtomary modes of cultivation. In no part of culture, this is, or can be more conſpicuous than in that of hemp and flax, which, in the courſe of more than a century, has not received any viſible improvement, although they are every year becoming more important, as materials for numerous and various branches of our manufactures.

In the north-eaſt part of the county of Cumberland, where I reſided for ſeveral years, and was concerned in carrying on a branch of the linen manufacture, I endeavoured much to introduce a different mode of proceſs in the growth of flax, and every part of the proceſs it muſt neceſſarily go through before its being fit for the heckle. For this purpoſe, for ſeveral years, I had from three to five acres under flax. My principal intention was, to ſhow a ſuperior attention in the choice of the ground, in the preparation previous to its receiving the ſeed, in the weeding of the flax when growing, in pulling it at a proper time, preſerving the ſeed, watering the flax, ſpreading it to whiten the bark or ſkin, for drying and breaking the bone or ſtem, and ſeparating the ſhoves from the flax, &c.; all of which were the direct reverſe of the common modes in uſe, and which I endeavoured to render as conſpicuous as poſſible, in order to encourage, by example, a deviation from the cuſtomary proceſſes in uſe. But, for upwards of nine years, neither example, nor the experience of the good

good effects which my management had in that time produced, were ſufficient to gain any imitators in the neighbourhood.

As I managed the dreſſing of the flax and ſpinning of the yarn for the manufactory in which I was concerned among them, I took every occaſion to converſe with, and ſhow the ſpinners the difference betwixt the foreign flax we uſed, and what I grew, in reſpect of ſtrength and other advantages, with reſpect to the durability of cloth made from my production, and that made from foreign flax; and they were, from their own experience, convinced of the ſuperiority of the foreign flax to what they produced on their own land; and every farmer, as well as cottager, cultivated more or leſs every year.

They had hitherto been under the neceſſity of purchaſing ſome foreign flax, in addition to what was produced from their own growth; and at length they were ſo well convinced of the ſuperior properties of mine, that they would purchaſe no other when I had any to ſell. I had at laſt the ſame ſucceſs with the ſale of my ſeed, although, at firſt, ſo far were they from purchaſing it, that they would not even accept the gift of it; only thoſe who could not afford to pay from 3d. to 4d. a pound for foreign ſeed, on them I prevailed to accept of ſome; and, by inſtructing them how to uſe it, I at laſt ſucceeded ſo far, that no other ſeed could be ſold at market while I had any to diſpoſe of. My proceſs then began to gain ground alſo among thoſe who could afford to make the experiment.

Yet it is with me a matter of doubt, if there remains in that part of the county any veſtige of it. Although I had annually as much ſeed as was neceſſary for next year's ſowing, and ſold as much, after the quality was perfectly underſtood, as paid land rent, and every expence till the flax was put in the water; yet, owing to the want of experience in thoſe I was obliged to employ in the ſubſequent ſteps, and their intractability, my flax came to the heckle as dear as the foreign flax did. My only advantages were in the ſuperior quality both of flax and ſeed, and having experimental proof, that, under proper cultivation, we might in a few years produce flax nearly ſufficient for the ſupply of our linen manufactures, and ſeed for ſowing, for oil, and great quantities for exportation, and both of a much ſuperior quality to what we uſually import, eſpecially the ſeed.

Upon peruſal of this, ſhould it appear to merit your notice, and you condeſcend to ſignify a wiſh for a more detail-

ed account of my method, I will think myſelf honoured by your commands, and will, by letters or perſonal attendance, at your option, explain, in the minuteſt manner, to the beſt of my ſlender abilities, the whole proceſs, from the ſeed to the loom.

I conclude, as I began, without any apology, and with ſubſcribing myſelf, Sir, Your obedient humble Servant.

P. S.—I was in my youth bred to the linen manufacture, and, in maturer years, carried on the manufacture of different articles in that branch on my own account.—To make the raiſing of flax an univerſal or national purſuit, it will be neceſſary to give pecuniary encouragements; not in ſuch manner as has been done, for the largeſt quantity raiſed by one perſon in one year: this is an oſtenſible, but not a real or well applied encouragement; nor will it ever promote any real national advantage. Some perſons of fortune may, for applauſe, ſow a quantity, for the purpoſe of gaining the premium for that year only, as the premium is given on the quantity grown, but not for preparing it for uſe; while, perhaps, neither ſeed nor real flax is produced by the attempt. The premium, therefore, ſhould only be given for flax and ſeed fit for the manufacturer, and proportioned to the quantity and quality ſo produced; to be continued annually for a certain number of years; or (ſhould the expence not be deemed too great) till the practice become general. Let the bounty on linen cloth be withdrawn, and applied to this more neceſſary and beneficial purſuit; as ſuch bounties never are of any uſe to our manufacturers, but are a conſiderable expence to the public.

None but the countries who at preſent ſupply us with hemp and flax, are in the leaſt benefited by this well meant, but ill judged bounty; for, ſo long as they know we muſt apply to them for theſe materials, they will add to the price of the articles as much every year, as will more than counterbalance the end for which ſuch bounties are given; and, by the advance on the price to our manufacturers, they will ſtill be capable to underſell us, both in foreign markets and our own, in the ſame manner as if theſe bounties had never been given. But, the inſtant they find we give premiums for the home production of theſe materials, they will lower the price and duties paid upon them, in order to prevent a rivalſhip which would materially injure them, and benefit ourſelves.

AN

AN APPENDIX, shewing the great National Advantages, by the Employment of a number of People, during the Autumn and Winter Quarters, and other parts of the Year, which the Encouragement of the Growth of FLAX will produce, with the number of People One Acre will employ.

Average Expences of One Acre of Flax.

	£.	s.	d.
Rent of the land - -	1	5	0
Ploughing, sowing, &c. -	0	10	6
2¼ bushel seed - -	0	18	0
Weeding - -	0	4	0
Pulling - - -	0	3	0
Carriage, and getting in the harvest - - -	0	15	0
Tithes - -	0	5	0
Poors rates, highways, &c.	0	5	0
Thrashing - -	0	14	0
Watering, carriage, and spreading - -	0	10	0
Braking and swingling -	1	14	0
L.	7	3	6
Deduct			
The value of 12 bushels of seed, which is frequently sold to the oil mill, for the making of lintseed oil - -	4	4	0
L.	2	19	6

Stones of Flax 14 lb. Weight. Average produce.

	£.	s.	d.
30 stone flax, at 5s. 8d.	8	5	0
Deduct			
Expences on growth as above - -	2	19	6
L.	5	5	6

Produce of Flax from the 30 Stones. *Value per lb.*

	lbs.	d.	£.	s.	d.
Of flax - -	90	at 10	3	15	0
Ditto - -	170	8	5	13	4
Short flax - -	40	6	1	0	0
Clearings - -	30	5	0	12	6
Hurds - -	60	2½	0	12	6
Waste - -	30	..	..	..	..
			L. 11	13	4
Deduct					
Heckling -	1	0	0		
Value of flax brought down -	8	5	0		
			9	5	0
			L. 2	8	4

APPENDIX CONTINUED.

Produce of the Acre in Yarn.	*Each Lea of Yarn is 800 Yards.*	*Value per lb.*				
		lbs.	*d.*	*£.*	*s.*	*d.*
Of Linen yarn,	10 Lea	40 at	20	7	10	0
Ditto		170	16	11	6	8
Ditto	6 Lea	40	12	2	0	0
		30	6	1	2	6
		60	4½	1	2	6
				L. 23	1	8
Deduct						
Spinning the different yarns		L. 11	8	4		
Working the flax brought up		9	5	0		
				20	13	4
				L. 2	8	4

Produce of the Flax in Cloth.	*Value per Ell.*				
	ells.	*d.*	*£.*	*s.*	*d.*
Of cloth	145 at	19	11	9	7
Brown	197	17	13	18	10
	45	14	2	12	6
	28	13	1	10	4
	45	11	2	1	3
			L. 31	12	6
Deduct					
Weaving, winding, warping, bucking	L. 8	7	2		
Expences brought forward	20	13	4		
			29	0	6
			L. 2	12	0

N. B. The manufacturing part of the produce will employ 15 persons full three months, the different works being thrown on an average.

The above statement will be subject to great variations, according to the difference of crops.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Floating of Land.

GENTLEMEN,

AMONGST the many pertinent and ſenſible remarks in your review of Mr Middleton's Survey of Middleſex, I was ſurpriſed to find that the reviewer ſhould think Mr Middleton ſpeaks in rather too high terms on the ſubject of irrigation, when he ſtates, 'that forty acres of good water-meadow will ſupport, in the greateſt luxuriance, 500 Wiltſhire ewes and lambs for ſix weeks, from the middle of March to the firſt of May.' On this quotation from Mr Middleton, the reviewer obſerves, 'that it exceeds any thing he has met with reſpecting the produce of graſs land; for it is only the beſt meadow that will feed five ewes and lambs per acre, from the middle of March to the firſt of May; and the greateſt part of the paſtures in the kingdom will not ſupport near ſo many.'

As the produce of watered meadows certainly very far exceeds the produce of the beſt paſture land, or the beſt *unwatered meadow* in the kingdom; and as the floating or watering of land is one of the greateſt improvements that can be introduced into any country, when the rearing or feeding of ſtock is an object; I would beg leave to point out to the attention of the reviewer, the following ſtatements of the produce of watered meadows by different authors.

Mr Davies, in his Agricultural Survey of Wiltſhire, on the ſubject of Watered Meadows, ſtates, 'that *one* acre of good meadow will ſupport 500 Wiltſhire ewes and lambs for one day;' conſequently, forty acres will ſupport the above ſtock for forty days, which is only two days leſs than in the ſtatement given by Mr Middleton.

Mr Wright, in the ſecond edition of his treatiſe on Watered Meadows, gives the following inſtance of the produce of a meadow in the neighbourhood of Cirenceſter. 'It was one which had been watered longer than the oldeſt perſon in the pariſh could remember, but was by no means the beſt meadow upon the ſtream, nor was the preceding Winter favourable for watering. It contains ſix acres and a half. The Spring food was let for ſeven guineas, and well ſup-

ported near 206 ſheep, from the firſt of March till the beginning of May; the hay was ſold at thirty-two guineas, and the aftermath for ſix guineas. A meadow of ſeven acres, the whole crop of hay on which had been ſold for 2l. before it was watered, has, ever ſince it has been laid out as a watered meadow, been let at the annual rent of 3l. per acre.'

In Mr Wright's third edition, is the following account of the product of a meadow:

'In order to make the moſt of the Spring food, the proprietor kept the graſs untouched till the 2d day of April; from which time he let it to the neighbouring farmers, to be eaten off in five weeks, by the under mentioned ſtock, at the following rates per head: A ſheep, 10d. per week; a cow, 3s. 6d.; a colt, 4s. The quantity of land is eight acres.

107 wedder ſheep, one week		L. 4	9	2	
8 cows,	ditto -	1	8	0	
4 colts,	ditto -	0	16	0	
		L. 6	13	2	
				5	weeks.
Total of 5 weeks		L. 33	5	10	
3 colts, 3 weeks, to be added		1	16	0	
		L. 35	1	10	or 4l. 7s. $8\frac{9}{12}$d. per acre.

After being fed as above, the hay crop was, as uſual, about fifteen tons, and was ſix weeks in growing.'

Since ſuch are the immenſe advantages to be derived from the floating of land, and that, wherever there is a conſiderable ſtream of water, many acres may be thus highly improved, I think extracts from the treatiſes of Mr Wright, on the art of floating land, and from Mr Davies's account of the art, in his Survey of Wiltſhire, might be introduced with great propriety into your valuable Magazine.

Yours, &c. S. E.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Observations on Expences of Farming; on Manorial Claims; and on Improvement of Entailed Estates, &c.

GENTLEMEN,

I HAVE perused the first Number of the Farmer's Magazine, with much satisfaction. The Introduction is a masterly composition; so are many of the communications.

The spirit of investigation, this publication may raise, cannot be disagreeable to the publishers; it could therefore have been wished, in place of *the annual charge attending a plough and two horses*, they had mentioned the quantity of land, of a particular kind, these might labour, the expence, and the produce, that one might see what profit should reasonably be expected. As it stands, this is only part of an account; and most of the articles may be said to be paid by the farm itself, or furnished by it, which amounts to the same thing *.

There is another thing may probably appear very simple to many of your readers, the want of knowledge of which, has, last year, caused a good deal of loss, viz. *the best mode of preserving apples through Winter.* This, the people who deal in large quantities must certainly know: an account of it would be agreeable to many of your readers.

As to *manorial claims*, I am afraid your correspondent has only looked at one side of the picture; and as he admits he has not gone to the origin of them, his hints must be defective: He does not even seem to look forward with much penetration. As to the *game;* admitting, for the sake of discussion, that all the game-laws hitherto enacted in favour of proprietors,

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Remark by one of the Conductors.

* If the account presented, p. 46, be correct, (and we believe it is near the truth), what is said above, by our respectable correspondent, is rather out of place. The *Rural Economist* professed to give no more than the annual charge of a plough and two horses, and his statement includes every article: so cannot, with the least propriety, be considered as "*only part of an account.*" That several of the charges are for articles furnished out of the farm produce, is no objection; for, if not consumed in this manner, they would have just drawn as much money at market. It might, with equal truth, have been alleged, that a farmer pays nothing for his farm, when the rent is delivered *in kind.*

N.

proprietors, were aboliſhed; and that a new legion of Nimrods were created in the farmers and their ſons; and that this noways abated their induſtry in farming:—How could the proprietor, who was a ſportſman, be prevented from conditioning with his tenant, that he reſerved the game to himſelf, or to ſuch other gentlemen as might have leave in writing from him? This, every landlord would immediately do, and with more reaſon than excluding aſſignees and ſubtenants; for, though power were granted both to aſſign and ſubſet, ſtill would the principal tenant be liable to pay the rent. With regard to *copy-holds*, theſe are analogous to our *feu-holdings*. Now, as to theſe, the lord of the manor, having been the proprietor, had aſſuredly a right to grant theſe (which are neither more nor leſs than perpetual leaſes) on any conditions he choſe. The fines on the entry of heirs, are therefore equal to fines on renewal of leaſes to ſons of tenants. *Millſokes* or *multures:* When the lands are ſold with this burden, they ſell ſo much cheaper: when the lands on which the mill ſtands change maſters, a greater value is given on that account. *Waſtes* muſt be divided according to the value of the intereſts of thoſe who have right. *Minerals* are accounted for, in being claimed by the lord of the manor, from his reſerved right of property. If, indeed, the Legiſlature ſhould judge it beneficial, to cauſe all or any of theſe claims to be valued at certain rates, and ordain the lord of the manor to ſell, and the copy-holder or feuar to buy, it is uncertain if this would give much ſatisfaction; and to give an option to the latter, would not be embraced. Witneſs the few rights of patronage purchaſed by the pariſhes, in the beginning of this century, on a ſimilar option. Neither would a rent-charge, or additional feu-duty, in place of theſe, where neither of the parties inclined to purchaſe, pleaſe much better. And periſh the pretended reform, that would rob any honeſt man of his right, by taking it from him without a compenſation! *

To

* While we applaud the ſpirit of the above exclamation, we muſt remark, that the advancement of the public good renders it neceſſary, upon many occaſions, to ſacrifice the intereſt of individuals. If Henry VIII. and the Lords of the Congregation, had acted according to our correſpondent's principles, the Reformation would not have been introduced into theſe kingdoms; nor would the glorious Revolution of 1688 have taken place. The fact is, that every law for improvement, injures ſome individual or other; which might be exemplified by innumerable inſtances of legiſlative interference, was the point in the leaſt degree queſtionable. N.

To ſhow the reader, that the writer of theſe ſheets is no enemy to the improvement of the country, or to an amendment of the laws for that purpoſe, he begs leave to ſuggeſt the following conſiderations as to *entails*. The power allowed to heirs of entail to ſell, for the purpoſe of redeeming the land-tax, was highly proper. Had it been extended to all the public taxes, there would have been no harm; could a plan be contrived, by which it were certain the money would be applied to that end. To allow them to borrow a ſum ſufficient to purchaſe an annuity equal to theſe, on giving proper ſecurity to the clerk of entails, that the annuity was to be ſo applied, would poſſibly anſwer the end; or to borrow a ſum, which, lodged with their banker, the intereſt ſhould be adequate to the purpoſe, ſecurity always being given for the proper application, as above: for, although the entail might provide againſt the extravagance or facility of the heir, he muſt have been ſubject to the taxes, had he been able to perpetuate his life, as well as his eſtate; as he could have had no right to lock up his funds from the ſervice of the public, to which he muſt have contributed, if alive. In fact, the ſtatute for the improvement of lands under ſettlements of ſtrict entail, has not been found to anſwer the end; becauſe it required the heir of entail to lay out the money, in the firſt place, which he generally cannot afford to advance; and, being little other than a liferenter, cannot borrow, as few creditors chooſe to lend on aſſignment to his claim againſt the next heir. To allow him to borrow, on a petition to the Court of Seſſion, with a ſpecific plan and eſtimate of the intended improvements, and intimation of the petition to the next heir, and on caution to the ſatisfaction of the clerk to the regiſter of tailzies, would tend more to the improvement of the eſtates, and be perfectly ſafe, if there were a ſtatute obtained to authoriſe the meaſure. And this clauſe, of caution to the ſatisfaction of the clerks in office, is perfectly cuſtomary in Scotland, in judicial ſales, in removings, &c. &c.

Wiſhing your publication all manner of ſucceſs, I am,

Your moſt obedient ſervant,

MILONIDES.

FOR

FOR THE FARMER'S MAGAZINE.

Short View of Agriculture in Ruſſia *.

In the vaſt extent of territory now included in the Ruſſian dominions, the people who have, from time immemorial, attached themſelves to agriculture, (however rude, and with whatever ſucceſs), are the *Ruſſians*, properly ſo called, the *Poles*, the *Lithuanians*, the *Lettes*, the *Finns*, and the *Eſthonians*, who dwell conterminous to one another, in the N. W. quarter of this great empire. As the firſt of theſe, however, compoſe the chief and moſt numerous claſs, the following particulars muſt be underſtood as principally confined to them, with this preliminary obſervation, that in the whole ſtretch, from eaſt to weſt of the Ruſſian territory, there is hardly any part ſuſceptible of cultivation, beyond the 60th degree of north latitude, and even to this extent only in the weſtern parts, as the frigid region extends farther and farther ſouth, the more eaſterly we go, till, at the point of Kamtſchatka, on the ſhore of the American Ocean, cultivation is impracticable beyond the 51ſt degree; thus, leaving a tract of about 160,000 ſquare miles bound up in eternal ſterility, froſt and ſnow.

The chief implement of Ruſſian agriculture, is the *fork* or *hook-plough*, deſcribed as having two ploughſhares faſtened to a forked board, and is uſually drawn by one horſe, or by two oxen; and is held by a lad of fifteen, who drives at the ſame time, but making a furrow of only 1½ inch deep. This is uſed generally on lands that are in conſtant tillage; but when new grounds are broken up, what is called the *knife-plough* is employed, and which, after all, goes only about half as deep again. At other times, it ſhould appear, that the land, in this caſe, is ploughed twice, firſt with the knife-plough, cutting the turf into ſlices, and then with the fork-plough, at which time the ploughman muſt turn the furrow over, as it riſes, with his foot; from which it may be inferred, that this ſimple implement does not poſſeſs that power of itſelf, but does probably operate in a ſimilar manner to the *ſcrape-plough* in Britain (drawn alſo by one horſe), which is ſometimes

* This is collected from the 3d Vol. of *Tooke's View of the Ruſſian Empire*, lately publiſhed. A work of great merit, and abounding ſo much in matter well choſen, and ſo well arranged, as almoſt to preclude abridgement.

ſometimes uſed in cutting up the weeds in the intervals of drilled crops. The harrow is ſtill more ſimple than the plough, being compoſed entirely without iron, and in many places without even wooden pins; it being the practice, in ſome provinces, to conſtruct it with branches of trees rudely interwoven together. The *roller* is hardly known at all. The Finns never uſe any other but the branch-harrow, and frequently the *rake* inſtead of a plough.

One ſhould imagine, from this ſuperficial mode of tillage, that the crops would turn out very defective. This, however, is by no means the caſe; for, ſo rich is the ſoil by nature, that an ordinary crop of rye is from eight to ten fold, barley twelve, oats twenty, and wheat almoſt never below ſix.

In Finnland, the *beſt* mode of carriage is a two-wheeled ſmall cart; the wheels unſhod with iron; but more commonly two poles faſtened at one end to the ſides of the ſaddle, and the other ends trailing on the ground. The Ruſs, however, have their wheels ſhod with iron, and many examples of four-wheeled carts.

The *reaping* inſtruments are various. The ſickle, the common ſcythe, and the great German ſcythe. The Lette cuts his crop with a little ſcythe, fixed to a ſhort handle, which he holds in his right hand, having in his left a ſmall hook, with which he collects as much of the corn as he intends to cut at once. The Tartars uſe ſhort, but very arched ſcythes, on a ſhort handle; and, ſtanding upright, they cut both to right and left. The corn, after it is bound up, is ſet on end in circles of ten ſheaves, leaning againſt each other, and covered with one inverted at top.

Wheat and rye are ſown from the 1ſt of Auguſt to the end of September; and as the Spring is late of commencing, the Spring crops are not ſown till about the beginning of May. Harveſt is in July and Auguſt. From this, it may be conceived how rapidly vegetation comes on. In fact, the Spring ſeaſon in Ruſſia can hardly be ſaid to exiſt; as, from the ſtern rigour of Winter cold, the weather burſts forth, at once, into all the fervency of the heat of Summer.

Potatoes, ſo general in the North of Europe, are not cultivated by the native Ruſs at all, except only in the government of Archangel, in 63 degrees of latitude, where no kind of corn comes to maturity; yet here potatoes thrive wonderfully, producing from thirty to fifty fold.

In the northerly provinces, the corn is kiln-dried in the ſtraw (by the author improperly called *malting*); the thraſhing

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of corn, over all, is by the common flail; in ſome places, by the ſtill more rude method of *treading* it out with men, or with horſes, and this on the ice as well as the barn floor.

It does not appear, that artificial graſſes, of any kind, are ſown; but nature, in ſome ſort, precludes the neceſſity, by the immenſe product of the meadow hay.

Rotation of crop, in the view of melioration, appears alſo to be unknown. The crop is indeed changed from one kind of corn to another; but the *green* crops, or thoſe which fertilize the ſoil, bear no proportion to the *white*, or thoſe which tend to ſterility; yet ſo bountiful is nature in defiance of this treatment, that, in the words of the intelligent author, "there is no country in Europe, where agriculture is conducted with ſuch negligence, and yet yields ſo great a return."

In the management of cattle, the Ruſs is perhaps not behind moſt of the European nations: with regard to numbers, he is better provided than any. Almoſt every peaſant has his horſe, beſides other cattle. The very beggars have their milch cow. The number of live ſtock poſſeſſed by ſome rich individuals, among the Tartaric nations in the ſouthern quarter of this empire, is almoſt beyond belief. Fifty thouſand ſheep are ſtated as belonging to one perſon. Another has 10,000 horſes, 300 camels, 3500 black cattle, 20,000 ſheep, and 1000 goats. The patriarch Job would not have been reckoned the greateſt man of the Eaſt, in this country.

Beſides all ſorts of cattle common to the reſt of Europe, there are ſome which ſeem peculiar to the Ruſſian empire. Thus, the *Dſhiggetei* and the *Khulan*, not aſcertained whether they belong more to equine or to the aſſine ſpecies, are met with in vaſt droves, in the foreſts to the northward of the Caſpian. Nothing can exceed them in ſwiftneſs, nor in their fierce and untameable diſpoſition. There is likewiſe a beautiful race of wild horſes, of a bay colour, in the wilds of the Ukraine, that hardly yield to the foregoing in any of the above qualities. Camels are native in the ſouthern provinces, as likewiſe buffaloes, both ſubjected to the rule of man. In the north, the rein deer of Lapland are trained to the yoke of the Ruſs; while in the eaſt, by Kamtſchatka, dogs are applied to the ſame purpoſe. To conclude, *The View of the Ruſſian Empire*, by Tooke, from whence the above ſhort notes are ſelected, is a work that cannot fail to be intereſting to readers

ers of almoft every defcription; and, in particular, to the amateurs of Agriculture and Rural Affairs *.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Quality of Rye-Grafs Seed.

GENTLEMEN,

I was highly pleafed with the obfervations given in your laft, refpecting *the management of hay*, from which, in my humble opinion, much benefit may be derived. It would have given me additional pleafure, had the well-informed author of that paper communicated his fentiments, concerning the *kinds*, *qualities*, and *quantities* of feed, proper to be fown for producing a full crop of that neceffary article; as I believe, upon thefe points, the public in general are much at a lofs. In this country, agriculturifts are nearly at one, that red clover and rye-grafs afford the greateft return; while, in our fifter country, very different notions are entertained. Taking it, however, for granted, that red clover and rye-grafs are beft calculated for producing a full crop of hay, I beg leave to inquire, in what manner the kind or quality of the rye-grafs is to be afcertained? It is notorious, that an annual kind of rye-grafs is lately introduced, which has been attended by heavy loffes to the farmers who have fown down land, with a view of allowing it to remain in paflure for two or more years; and I am alfo inclined to think, that many noxious weeds, both of annual and perennial foils, are now generally mixed amongft the greateft part of rye-grafs. It is evident, that, fince grafs feeds have been fown in quantities in this country, a vaft increafe of that deftructive and pernicious weed, provincially called *knot-grafs*, or *fwine-arnol*, has taken place; and that, upon a great many foils, it is fcarcely poffible, with every degree of pains, to extirpate it. I have noticed fields very completely fallowed, when fown

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* We do not mean, however, from this, to give an unqualified approbation to this work. The author has allowed himfelf, in fome inftances, without reflection, to adopt very ill-founded opinions from others. For example, what he ftates of Sweden, having a population of 220 to the fquare mile, and European Ruffia upwards of 400, is beyond all bounds extravagant. N.

ſown with ſeeds among the firſt crop, and taken up after lying only one year, to have been quite filled with this baneful plant or weed; which was a circumſtance hardly to be expected, unleſs the ſeed had been mixed among the rye-graſs. Some old farmers inform me, that very little of it was to be ſeen till within theſe fifty years, or ſince the ſowing of graſs ſeeds became general, which is the more remarkable, as the practice of huſbandry has, out of all doubt, received much improvement during that period. It appears, therefore, to me an important object, that the farmer ſhould be provided with rye-graſs of a right kind and quality: and, to attain this, I know of no better method, than that every farmer ſhould raiſe his own ſeed, which I moſt earneſtly recommend.

Yours, &c.

A Rural Economist.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Gentlemen,

Good roads are ſo neceſſary to the improvement of the country, that few objects are ſo intereſting to thoſe who are concerned in its welfare. Till roads are made good, and the communication between different places be rendered eaſy and commodious, it is ſcarcely poſſible that any capital improvement can take place. An unneceſſary waſte of labour, to a great extent, is the unavoidable conſequence of bad or inconvenient roads; and perhaps this waſte or loſs, if it could in any degree be accurately computed, amounts, in Britain, to a greater ſum *per annum*, than would be required to put the whole public roads at once into a complete ſtate of repair.

This ſubject has occurred to my mind, from having lately had occaſion to travel the *new* or middle road from your city to Glaſgow, which certainly has been laid out and conſtructed upon more ſcientific principles than any other road in this iſland. There is hardly ſuch a thing as a ſingle riſe in the whole line of road; at leaſt, any variation from the level, has been executed in ſuch a judicious manner, as ſcarcely to be perceptible to the eye, or to incommode the traveller in his paſſage. In a word, the gentlemen who undertook ſuch an important work deſerve well of the public, by thus providing a communication betwixt two great cities, whereon a ſingle horſe is capable of drawing a heavy load with greater facility

facility than is practicable, upon many other great roads, with a double number.

I beg leave to notice, that ſome parts of the road, where embankings have been neceſſary, are not provided with a wall or row of poſts, for the ſecurity of travellers, which will be a dangerous neglect in Winter nights, or during a ſnow ſtorm. This occurs particularly at two places to the weſtward of *Airdrie*, and ought to be inſtantly remedied.

Excellent houſes for the accommodation of travellers, are likewiſe provided at every ſtage; and, if the adjoining ſoil, the capital ſtock of the inhabitants, was of a ſuperior quality, this road might be travelled over with pleaſure and delight, in every reſpect.

Yours, &c.

A Traveller.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Gentlemen,

The diſtreſſes ariſing from the ſcarcity of fodder having been ſeverely felt throughout the whole of Britain during the late uncommon ſeaſon, eſpecially in the hilly and upland diſtricts, I take the liberty (through the medium of your Magazine) of offering ſome hints, which, if properly taken up, may have a tendency to leſſen the evil in future.

The moſt prominent feature of the Highland huſbandry, next to the almoſt total inattention to the breed of their ſheep and cattle, is the improvidence and want of care in ſecuring a proper ſupply of Winter ſuſtenance for them; a neglect the more to blamed, as it is fully in their power to procure a ſufficiency with little trouble, and almoſt without expence. In theſe elevated ſituations, abundance of herbage of a nutritive quality is produced, upon which the animals not only live, but fatten, during Summer, and which, when the Winters are mild, continues to ſupport them in health and vigour during that inclement ſeaſon. In years ſo calamitous as the laſt, however, the caſe is ſomewhat different. A continued ſeries of cold wet weather during the Spring, Summer, and Autumn, killed many ſheep and lambs early in the year, and

prevented thoſe that ſurvived from acquiring fleſh or ſtrength at the proper ſeaſon: In that debilitated ſtate, they encountered one of the ſevereſt Winters ever remembered; an evil that was greatly aggravated by the heavy fall of ſnow at its commencement, which in many places entirely deprived them of food. The conſequences are but too well known. Great numbers periſhed in the firſt inſtance; and, of thoſe that reached the Spring, many have died from weakneſs alone. This, however, has not generally been the caſe; as, upon almoſt every farm where a ſufficiency of hay and other articles of a good quality were laid up, the ſtock has been kept in tolerable condition during the Winter, and reached the Spring nearly in the uſual way.

The evils ariſing from the want of a proper proviſion for the ſtock upon Highland farms, during Winter, has long been obſerved and lamented by intelligent men; and many attempts have been made, both by patriotic individuals and public ſocieties, to leſſen them. Amongſt theſe, the labours of the Highland Society hold a diſtinguiſhed place, and will long be remembered by the country at large with gratitude and pleaſure. The encouragement held out to Highland farmers, for the purpoſe of enabling them to ſow broad clover, and cultivate turnips and other green crops, has already produced very beneficial effects; and, if carried to the extent of which the ſyſtem is capable, will, in many diſtricts, not only prevent the evils ariſing from bad Winters, but produce additional benefit, by enabling the farmers to keep their young ſtock in a growing ſtate throughout the whole year; a matter of much more importance than is generally imagined; as both ſheep and cattle, ſo treated, make more progreſs in two years, than ſuch as are half-ſtarved during the Winter uſually do in five. But, as there are many extenſive tracts, where the nature of the ſoil and other circumſtances prevent green crops from being introduced to any great extent, it is of much importance to perſons poſſeſſing farms in theſe parts, to be able to ſubſtitute ſomething in their place:—that ſubſtitute, nature has bountifully provided, even in the moſt expoſed ſituations.

The article we mean, is *heath*; which, from the experience of ages, is known to contain a wholeſome and palatable nouriſhment, when eaten in a green ſtate; and, it is well known, proves that every kind of green herbage, hitherto employed for feeding our domeſtic animals, is alſo calculated to ſupport them in health and vigour, when dried, provided

it

it is cut at a proper period, and due pains taken to preſerve it. The value of the different kinds of ſtraw and hay is ſo well known, that it would be abſurd to attempt any reaſoning upon it.—Have we the leaſt room to ſuppoſe, that heath, if cut at a proper ſeaſon, and well managed afterwards, would not alſo be found highly uſeful?

Growing in ſituations where ſcarce any thing elſe will thrive, the qualities of heath have not only been overlooked in many inſtances, but its very exiſtence deemed a reproach upon the ſoil. That it was not conſidered in the ſame light by our anceſtors, is evident, from their underſtanding its qualities ſo well, as to be able to prepare from it a fermented liquor, of a highly agreeable flavour, and an intoxicating quality, which was uſed upon all their great occaſions. Indeed, we have a tolerable confirmation of this fact, by attending to the paſture of bees upon heath; from which, in a given time, they collect more honey than is uſually done from the richeſt fields of white clover during the ſame ſpace: and, as it is now aſcertained, that the food of bees is derived from the ſaccharine or fermentable matter contained in the flowers upon which they feed, and which acquires the diſtinguiſhing properties of honey, merely by paſſing through the veſſels of the inſect, and the particular organization of theſe veſſels, it may ſafely be inferred, that heath, when properly managed, contains properties greatly ſuperior to what it is generally thought to poſſeſs. Were any doubt to remain, additional conviction would ariſe from the high flavour and other good qualities of the Highland mutton, ſo juſtly celebrated over the whole iſland, reared in ſituations where the animals have not any other food but heath.

In Sweden, the practice of cutting heath for Winter food has long prevailed; and the heath-harveſt, in ſome parts of that country, is as regular, and as much attended to, as the corn-harveſt in the moſt fertile provinces. Long experience has taught the natives its value, and furniſhed an example that ought to be followed by other nations, ſimilarly circumſtanced as to ſoil and climate. In that country, it conſtitutes a bulky and eſſential article of Winter food, in many ſituations where no other can be obtained. Little coarſe hay is produced in the Swediſh hills and uplands. Sown graſſes are unknown. Straw and turnips are equally ſcarce, except in the corn provinces; and even there, the only broad-leaved crop cultivated for Winter food, is the roota baga, or Swediſh herb; a vegetable that unites, in a conſiderable degree, the

qualities both of the cabbage and turnip. But, allowing turnips, hay, and other articles to be produced in much greater quantity than they are, even in the moſt fertile of the Swediſh provinces, it would be found impoſſible to tranſport them to the higher diſtricts, owing to the very inacceſſible nature of the country, the badneſs, indeed the almoſt entire want, of roads, and other unfavourable circumſtances. Thus inſulated, and cut off as it were from every ſupply but the produce of their own mountains, neceſſity has, with the boors of Sweden, become the parent of induſtry and invention, and taught them to appretiate the value of an article (deſpiſed or neglected in other countries) which they find fully adequate to their wants, and have for the trouble only of cutting and curing.

Were we ſimply to reaſon upon the ſubject, we would ſuppoſe, that a practice which has obtained for a length of time in any country, and from experience been found uſeful, would be adopted in every ſimilar ſituation. Britain reſembles Sweden in many reſpects. Both countries can boaſt of the moſt fertile corn provinces in Europe, and, in both, there is a large extent hilly and mountainous. It is well known, that theſe parts of Sweden, by the induſtry of the inhabitants, are rendered highly productive, principally by their management of heath. Have we any reaſon to think, that the produce of the hilly and mountainous parts of Britain would be leſs valuable, or of a quality leſs nouriſhing? The ſoil is, in every inſtance, equally good, and the advantage, in point of climate, greatly in our favour. This laſt circumſtance renders the cutting and ſubſequent treatment much eaſier in this country, than it poſſibly can be there.

At preſent, the uſage of the high lands and uplands throughout Britain, is to burn the heath, with a view to improve their paſture. By that operation, the tops of both heath and graſs are completely deſtroyed, and a conſiderable time elapſes before new ſhoots are produced; whereas, were the heath cut for Winter food, in the way we have mentioned, it would ſend out new ſhoots the following Spring; which, being of a tender and ſucculent nature, would form a palatable article of food for ſheep, with this additional advantage, that the graſs which grows amongſt it would ſpring up at the ſame time, and add to the value of the paſture.

In caſes where heath grounds have been cut or burnt for a few years, if the ſurface is tolerably ſmooth, the heath may be cut with a ſtrong ſcythe; but when it is of many years growth,

growth, and the ſtems have become hard and thick, that inſtrument will not be ſo very proper, as it is liable to bend, and get out of ſhape, and little work can be done with it in a given time. Other inſtruments have been propoſed, and certainly might be employed with advantage; but farmers, who are not in poſſeſſion of theſe, may make very ſatisfactory experiments, by cutting it with a common hedge-bill, an inſtrument with which a labourer can cut a conſiderable quantity in the courſe of a day.

With regard to the time of cutting, that ſhould be determined by the ſeaſon, and other circumſtances. Experience, which, in every caſe where it can be reſorted to, ought to be the ſtandard, both of opinion and practice, eſtabliſhes the fact, that cutting at an early period of the ſeaſon is the moſt certain way of obtaining a valuable and nouriſhing herbage. When we ſay early, no particular month, or period of any month, is meant; earlineſs depending entirely upon the ſeaſon, which, in an inſular ſituation like that of Britain, is very variable. The moſt certain criterion is, the progreſs the plants have made in their growth; as, at a certain ſtage, they poſſeſs properties, which are either impaired, or entirely loſt, if they are ſuffered to ſtand longer. Perhaps, when the flowers are fully expanded, the heath will be found moſt nouriſhing. Indeed, ſhepherds and others, who have paid much attention to the ſubject, think the paſture moſt valuable during the time it continues in bloom. If poſſible, it ſhould always be cut during dry weather, and immediately thrown into cocks or heaps, where it may remain for a week or ten days; after which, it may be put into large ricks, and allowed to ſtand, till it is found convenient to carry it to the ſituations, where there is a chance of its being uſed through the Winter.

In recommending a practice, which in Britain is entirely new, much diffidence and circumſpection are required; and, could no inſtance be quoted of the beneficial effects reſulting therefrom, leſs would have been ſaid upon the ſubject. The example of Sweden, however, where both ſoil and climate are inferior to ours, holds out to the ſtore-farmers of Britain a tolerable proſpect of ſucceſs. To thoſe immediately concerned, the matter is of conſiderable importance; and, as very ſatisfactory trials can be made, at a trifling expence, we indulge a hope, that the hints now thrown out will not be altogether uſeleſs to ſociety. A. Z.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Proper Mode of Ridging a Wet Clay Soil.

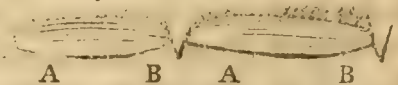
GENTLEMEN,

A PERIODICAL publication, such as yours, to put on record the facts that occur to the practical farmer in the course of his business, must tend to the improvement of Agriculture, and will ultimately prove of general utility to mankind. It is therefore to be hoped, that the intelligent farmers in Scotland will not let slip the opportunity of making observations on every subject relative to country affairs, and send you the result of their experience; that, by insertion in your Magazine, they may not be lost to the public; and, by accumulating a number of facts, be the means of establishing a more perfect system of agriculture: For it is partly owing to husbandmen living in the country, at a distance from neighbours, that agriculture has not arrived at the same degree of perfection with the arts carried on in towns. Farmers, however, endeavour to remedy the inconvenience of their situation, by communicating freely to one another their knowledge in rural affairs; whilst the wary inhabitant of the town endeavours to veil in mystery every process in his art, and transaction in his business: But the sphere of a practical farmer's communications must be confined to a very narrow circle; and for this, a publication such as yours, if farmers will only come forward with their observations, must be attended with beneficial effects to society. With this view, I now transmit you a few observations on the proper mode of forming ridges on a wet clay soil. It appears, from the remains of the ancient ridges in East Lothian, and I suppose also in every cultivated county in Scotland, that all the fields in cultivation, both of a wet and dry soil, were originally formed into high-gathered ridges, of betwixt thirty and forty feet in breadth. None of these were found straight, but were extended in well turned serpentine lines; which induced many, who have a great regard for the wisdom of our ancestors, to believe that they were formed in that manner on purpose, as being the properest for draining off the superfluous water, and best adapted for serving every purpose in agriculture. This, however, is an erroneous opinion; for the straight line

is, of all others, the beſt calculated for carrying off water with the greateſt celerity, thereby rendering a wet ſoil as dry as poſſible, which is of the utmoſt importance in the cultivation of the different grains at preſent in uſe in our northern climate. The curved form of theſe old ridges, certainly was occaſioned by the long teams of oxen and horſes which were formerly yoked in the plough, even to the number of twelve or fourteen, which, beginning to turn before the plough arrived at the end of the ridge, gradually changed it from the ſtraight line, till, in proceſs of time, the ſerpentine form was extended to the whole ridge. But theſe curved broad ridges, although ſanctioned with the ſtamp of antiquity, have, almoſt all of them, in this country, been levelled, and reformed into ſtraight narrow ridges, of from fifteen to eighteen feet in breadth. This operation was, however, always attended with a temporary loſs: for, unleſs great attention and expence was beſtowed, in preſerving the old vegetable mould on the ſurface, it was buried, in many places, beyond the roots of the plants which we cultivate, and a ſterile ſubſtratum of till brought up to ſupply its place, on which plants cannot be made to grow with the ſame vigour, as on the old ſurface ſoil. I do not know when narrow ridges were firſt uſed in England; but I have reaſon to believe, that the late John Cockburn of Ormiſton introduced them into Scotland early in this century. I have obſerved ſome ridges on the eſtate of Ormiſton, formed at an early period, at the breadth of ſix and nine feet. Theſe were ploughed alternately; the crown of the ridge, this year, forming the open furrow betwixt the ridges next year: But this form does not ſeem to have given ſatisfaction; for the whole ridges on the eſtate, at laſt ſettled at fifteen feet; which was of a ſufficient breadth to give them a conſiderable roundneſs, ſo as to allow the water to run with rapidity off the ridge into the furrow. When I entered to my farm, which is of a ſtrong wet clay ſoil, or brick loam, being a mixture of ferruginous clay, and vegetable mould, with a large portion of ſand in it—the under ſtratum a yellow ochrey clay, with a larger portion of iron and ſand, which conſolidates into a hard maſs, that admits of no water to paſs through it,—I found the ridges all of the breadth of fifteen feet, and continued them of that breadth, till about fourteen years ago, that, happening to ſee a letter from Mr Arthur Young, now Secretary to the Board of Agriculture, to a neighbour farmer, wherein he mentioned, that Mr Arbuthnot, who was eſteemed one of the beſt farmers in England, had found, from experience, that a

ridge, of the breadth of from thirty or forty feet, ſufficiently rounded, was the propereſt form for laying a wet clay ſoil dry; I immediately determined to try the experiment, and pitched upon a field of ſeven acres, that was already formed into fifteen-feet ridges; and, in order to form the broad ridges in a gradual manner, I continued for ſeveral years to caſt two ridges together, keeping an open furrow in the crown, till I got them of a ſufficient height, and properly rounded, when the open furrow was diſcontinued, which formed one high and broad ridge of thirty feet. The field was then Summer-fallowed, dunged, and ſown with wheat; the crop a good one, but not up to what I was entitled to expect. In the following Spring, which was a dry one, it was ſown, in good condition, with beans and peas, in the proportion of one pea to three beans. A few days after the field was finiſhed, one of the moſt extenſive farmers in the county paſſing it, ſaid to me, 'I ſee you are making trial of broad 'ridges; they are excellently formed, being well rounded, 'and of a proper height. I have not a doubt, that, if I chance 'to paſs your farm ſome years hence, I ſhall find all the 'ridges upon it formed after the ſame model.' Theſe broad ridges, which had thus received the approbation of this expert farmer, were ſoon put to the teſt. The weather broke, and a very wet Summer followed. Upon examining the field, from time to time, it appeared to me to be evidently injured by the breadth of the ridges: there was ſuch a preſſure of water on the ſides of the ridges, from their great breadth, that the clay ſoil, which had been highly cultivated in the Spring, was diſſolved into mud, in ſo much, that the water furrow betwixt the ridges almoſt diſappeared. When the crop came to be cut, not a ſingle pea was to be ſeen on the broad ridges, having all died early in Summer. The beans, a ſcanty crop, were evidently ſtinted in their growth by the wetneſs of the ſoil, few of them exceeding eighteen or twenty inches in height; but, on a round narrow ridge in the field, although of an inferior ſoil, there was a conſiderable number of peas at harveſt, and the beans were much more luxuriant in their growth. I muſt again obſerve, that the Summer was a remarkably wet one. A neighbour, who had a field of good beans, ſown upon caſten ridges of fifteen feet in breadth, ſhowed me an odd ridge in the field that was gathered, on which he had a third more beans than on any of the caſten ridges, which proved the neceſſity of laying beans dry this ſeaſon. After the beans were got off, the ridges were gathered, for laying them dry during the Winter; but, in the Spring,

Spring, the ſoil was in a wet coheſive ſtate, and did not pulverize in ploughing. Barley was ſown upon it, and I again examined with attention the ſtate of the field during the courſe of the Summer. It appeared to me to receive greater injury from the wet weather, than the neighbouring fields with narrow ridges of fifteen feet. The crop of barley was a ſcanty one; clover and rye graſs followed the barley, and then oats, which finiſhed the rotation. Not being ſatisfied with any of theſe crops, nor the ſtate of the ſoil after the rotation was finiſhed, I was determined to abandon the broad ridges, and make an experiment on a field formed into ridges even narrower than fifteen feet. The one in my eye was of a wet clay ſoil at one end of the ridges; but the greateſt part of it, although of a clay ſoil, was drier, being ſituated on a hanging bank, with a ſubſtratum that allowed the water to paſs through it. The crops that grew upon this drier part of the field, were always deſtroyed by the cut-worm, and produced nothing, ſome years, but a narrow ſkirting of grain, next the open furrows, betwixt the ridges. Obſerving that theſe worms infeſted the moſt elevated parts of the ridge, I conjectured, that, by forming the field into twelve-feet ridges, and keeping them flat, ploughing them crown and furrow, without even water-harrowing the drier part after it was ſown, would tend to prevent the cut-worms from making ſuch devaſtations on the young plants, before they puſh out their ſurface roots: for, whenever the plant arrives at this ſtage of its growth, the danger from the worm is over: and I had the ſatisfaction to find, it had the deſired effect of ſtopping the ravages of theſe deſtructive animals, in this particular inſtance. But the conſequences attending the ploughing the field alternately in ridges crown and furrow, particularly on the wet part, was evidently hurtful to the crop, for the following reaſons. It is obvious, that the ploughman, in deepening and clearing out the water furrows betwixt the ridges, muſt go deeper with his plough in that part of the ridge, than in any other; and, in a clay ſoil, they cannot be made too deep. When, therefore, the ridge comes to be reverſed, there is a ſolid baſe of ſoil under the cultivated ſurface, and, more frequently, a ſolid baſe of till, through which no water can paſs (the clay on the ſurface being in general nearly turned up with the plough ſhelving in this manner)



from the furrows, towards the middle of the ridges; but it is obvious, that this inclined form, A B, of the ſurface of the ſolid

ſolid under-ſtratum, towards the centre of the ridge, muſt be extremely unfavourable for allowing the ſuperfluous water to drain off from the pulverized ſoil into the water-furrows; and, conſequently, I always found the crops growing upon them materially injured in wet ſeaſons, and ſometimes nearly deſtroyed. But a loſs alſo attends this mode of ridging a clay ſoil, even in dry ſeaſons, when a deficiency of the crop, on the middle of the ridge, is to be obſerved, where it ought to have been beſt. This is eaſily to be accounted for. Every practical farmer knows, that, when a clay ſoil is ploughed, eſpecially in a drought, it is laid ſo open, by its crumbling into large maſſes, that the ſun and air in a few hours carry off its moiſture, and render it unfavourable for vegetation. When we add to this, that the ſides of the open furrows, and contiguous ſoil, over which the Winter rains and melted ſnows have paſſed, from being conſolidated with ſo much moiſture, become extremely hard in time of drought, this hardened ſoil on the ſides of the open furrow, being turned up by the plough in clods of different ſizes, when laid together in forming the crown of the new ridge, cannot be ſo well pulverized as the reſt of the ridge; and, conſequently, the drought continues to take a greater effect in depriving it of moiſture. To theſe cauſes I attributed the deficiency of the crop on the crown of the ridge in dry ſeaſons. But, of late years, our crops have ſuffered from too much moiſture; and the wet clays, that have been ploughed crown and furrow, in alternate ridges, have ſuffered accordingly. Paſſing, the other day, through ſome fields in the neighbourhood of Edinburgh, where that practice prevails on ſuch ſoils, I was ſhocked to ſee their wretched appearance; fields of beans, and other grains, with the couch graſs ſpringing up in them, thicker, and with greater luxuriance, than the oats or barley; ſome of the farmers in that neighbourhood ſeeming to deſpiſe good culture, in truſting to the ample doſes of dung they procure from the city of Edinburgh. Being thus convinced, both from reaſon and experience, that neither a very broad ridge, although well rounded, nor a flat narrow one, are proper forms to be uſed in ploughing wet clays; for ſome years paſt, I have adopted upon my farm well rounded ridges, of the breadth of twelve feet, gathering them up twice from the level for Summer fallow wheat, generally harrowing the field acroſs the ridges before the ſeed furrow, to keep them the flatter. After the wheat is off, the ridges are gathered before Winter: in the Spring, beans are put in, after caſting

casting the ridges: but before the ploughman begins, I make him go two bouts, throwing in the earth into the furrow that is to be ploughed out betwixt the ridges when they are finished; this keeps the ridges equally round, and all the furrows in the field nearly of an equal depth: gather after the beans before Winter; in the Spring, cast the ridges for barley, throwing in the open furrows as before; or, if necessary to give two furrows in the Spring, cast them twice, as, I think, cleaving ridges for barley ought to be avoided upon a wet soil, if possible; for the open furrow in the crown, even when laid close with a gathering, tends to lodge water there, for the reasons above assigned. I have also observed, that when a field of clay soil is ploughed across the ridges, after they have been cloven and harrowed, the soil on the sides of the open furrow on the crown, turns up in a more cohesive state than the rest of the ridge: this is owing to the plough's not going so deep, contiguous to the open furrow, whenever it loses resistance, on the land side, to keep it in the ground. By this mode, of always gathering the ridges before Winter, and casting them in the Spring, the solid earth under the cultivated soil is continually kept in the same rounded form with the surface of the ridge, to which the floods of rain, sinking, run off expeditiously to the open furrows betwixt the ridges; and these being deep, and cleared of obstructions, from the ridges being gathered before Winter, convey it with rapidity off the field, in proportion to the number of open furrows in it. I have therefore always found a well rounded twelve-feet ridge to be drier, and work better in the Spring, than a fifteen-feet ridge; and even a ten-feet, than one of twelve. But there are inconveniences that attend a very narrow ridge, which are not counterbalanced by its superior dryness: I therefore would not recommend them to be formed under twelve feet. If they are to be kept in tillage, four harrows, or two breaks, cover them; and I have not found that they are attended with waste of seed, as I never exceed three firlots of wheat or barley, and a boll of oats per acre, the quantity I sowed on fifteen-feet ridges. I have now finished my observations on the proper mode of forming ridges on a wet clay soil; if you think them worth the notice of the public, you may insert them in your Magazine. But as a number of your readers will no doubt favour broad ridges, I shall be glad to hear what they have to advance in their defence; for it is only from a free discussion of sentiments, through the medium

of

of the preſs, that error is to be exploded, and truth diſcovered, for the benefit of mankind; which, whenever it is attained, is the ſource of much happineſs to a lover of agriculture.

Banks of the Tyne, 2d June 1800. RUSTICUS.

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

General View of the Agriculture of the County of Fife; with Obſervations on the means of its Improvement. Drawn up for the conſideration of the Board of Agriculture and Internal Improvement, by JOHN THOMSON *D. D. Miniſter of Markinch.* 413 *pages*, 8*vo.* Creech, Hill, &c. *Edinburgh;* Nicol, *London.*

IT is a circumſtance extremely creditable to the Eſtabliſhed Scotiſh Clergy, that ſuch of their number as were appointed, under the authority of the Agricultural Board, to aſſiſt in the great work of executing a detailed ſurvey of the kingdom, have performed the reſpective parts aſſigned to them with ſingular ingenuity and judgement; while, in England, where the profeſſion is ten times more numerous, only one ſolitary individual, to the beſt of our recollection, viz. the Reverend Arthur Young, was ſelected from the clerical order for handling the labouring oar upon this important occaſion. The office of a ſurveyor, required that the perſon appointed ſhould be intimately acquainted with the different branches of rural economy and practical huſbandry, together with the poſſeſſion of a ſteady and enlightened mind, capable of diſcerning abuſes, and deſcribing how they might be rectified. Theſe qualifications appear to have fallen to the ſhare of the ſeveral clergymen whoſe reports have come in our way, in an eminent degree; and their labours promiſe to be equally uſeful, and deſerve as much applauſe, as if they had proceeded from the moſt perfect and practical ſcientific agriculturiſt.

The ſituation of a country clergyman, if his mind is devoted to rural affairs, preſents an excellent opportunity of accumulating a large ſtock of practical knowledge. Poſſeſſed of a glebe, (ſmaller, we confeſs, than the general merits of the profeſſion deſerve), he has it in his power to try all the different

different improvements which faſhion or the times recommend; and, if in good habits with the tenantry, (which every clergyman, if he wiſhes to be uſeful, will aſſiduouſly ſeek to be), he enjoys the fulleſt means of procuring information reſpecting the ſeveral branches of huſbandry, and comparing every theory, whether ſpecious or well-founded, with the different operations daily carried on before his eyes. If an obſerving mind is added, the perſon ſo ſituated, can hardly fail to be well qualified for deſcribing the rural œconomy of the diſtrict with which he is connected.

We have already (page 191.) examined the works of one reſpectable clergyman, and now proceed, with equal ſatisfaction, to open up the labours of another. As this gentleman had a path to tread only ſlightly marked out, the natural difficulties of the office were conſequently augmented: Theſe he has ſurmounted, with credit to himſelf; and, though we differ from him upon a few points, yet we have no difficulty in acknowledging, that he has deſcribed the huſbandry of the diſtrict in which he reſides, in a diſtinct and perſpicuous manner.

Fife is a diſtrict of great importance, and may be ranked in the ſecond claſs of agricultural counties. Local circumſtances confer many advantages upon it, being waſhed by the ſea, and the Friths of Forth and Tay, upon three ſides, from which a great ſtock of manure is conſtantly procured; and the abundance of limeſtone and coal upon its ſouthern ſhore, is not only advantageous to agricultural improvements, but highly conducive to the comfort of the inhabitants. Theſe circumſtances are ſatisfactorily detailed in the firſt chapter of the work, from which the reader will derive much uſeful information.

Property is greatly divided in this county; perhaps more ſo than in any other part of North Britain, which Dr Thomſon thinks is attended with the happieſt effects. The valued rent is 361,584l. Scots, which is above one tenth of the kingdom, and is a ſtrong proof that improvements had taken place at an early period. The *real* rent of many counties exceeds in pounds Sterling the nominal valuation in Scotiſh money; whereas, in Fife, the former is more than one third below the latter, being calculated at 212,000l. Every calculation of this nature, however, is queſtionable, being built upon hypotheſes, which do not afford any ſolid proof.

Our author is an enemy to entails, and we cannot but applaud the judicious ſentiments offered upon this article. No

doubt,

doubt, the evil of entails is much leſſened by a late act of Parliament; but ſtill they are attended with injurious conſequences to the proſperity of Britain, whether conſidered as an agricultural or commercial country. We ſelect the whole of this ſection, as deſerving ſerious attention.

"Tailzie, or entail, though ſometimes uſed to denote ſimple deſtination, is chiefly uſed to ſignify the ſettlement of a land eſtate upon a long ſeries of heirs, ſubſtituted, in ſucceſſion, to one another, containing prohibitory and irritant clauſes, which preclude any of the heirs from alienating the eſtate, by debt or deed, in prejudice of the ſubſtitutes ſpecified and fixed by the deed of entail. What proportion of the land in Fife is under this kind of deſtination, it is impoſſible, from any information I have been able to procure, exactly to ſtate. It is well known, however, that a great many eſtates, and ſome of theſe of the firſt magnitude, are ſtrictly tailzied.

"How far this mode of ſettling the ſucceſſion of heritage is wiſe and proper, may deſerve conſideration. To aſſume the power of determination juſt now, who ſhall poſſeſs the eſtate 500 years hence, when the preſent proprietor ſhall have as little intereſt in it as he had 500 years ago, has at leaſt the appearance of abſurdity. Perhaps, ambition to perpetuate the exiſtence of a family called by his name, at leaſt for many generations to come, is the motive. But, is vanity a principle of conduct which a virtuous and dignified mind would wiſh to adopt, or to avow? Or, is it his object, in ſecuring to his poſterity the unalienable poſſeſſion of his lands, that they may be enabled to ſupport, with greater dignity and ſplendour, the titled rank to which he has raiſed them? But is it certain that the poſſeſſion of the eſtate will prevent them from diſgracing the nobility, fairly, and perhaps hardly won, by the illuſtrious deeds of a worthy anceſtor?

"It merits conſideration, alſo, whether entails may not be unfriendly and injurious to the proſperity of a great commercial and manufacturing nation. The free circulation of land property is a powerful ſpur to enterprize and exertion; as, by that means, the merchant or manufacturer has it in his power to retire, when he thinks proper, from a hazardous employment, and to convert the profits of his ſucceſsful induſtry into a more ſtable and permanent inheritance. But, were all the eſtates in the kingdom guaranteed by entails to the preſent proprietors and their poſterity for ever, this would be rendered impoſſible.

"Beſides its being an unnatural reſtraint upon property, it not unfrequently puts it in the power of profligacy and diſſipation,

tion, to enſnare the honeſt tradeſman, who may not be appriſed of the terms upon which his employer holds his eſtate.

" Entails have often the unhappy effect, likewiſe, of reſtraining, within too narrow limits, the operations of natural affection, and natural juſtice, by putting it out of the parent's power to make a ſuitable proviſion for the younger branches of the family.

" Nay, in many inſtances, they prove a great bar to the progreſs of agricultural improvement. If the proprietor has a large family, when he finds that he can neither burden his eſtate, nor alienate any part of it, inſtead of devoting a liberal portion of his income to the amelioration of his lands, the advantages of which muſt be ultimately reaped by the heirs of entail, he will be led to ſave every ſhilling in his power for the education and ſettlement of his younger children. Or, if he has no heirs of his own body, and his eſtate, agreeably to the nature of the entail, muſt paſs into the hands of a diſtant relation, or of one with whom he has little connexion, and for whom he has little friendſhip, he will be equally indiſpoſed to project and execute ſchemes of expenſive improvement.'

A very ample and favourable character of the Fifeſhire farmers is given in the fifth chapter, which conveys to us a high idea of the author's liberality and candour. Some ſurveyors have not conſidered the Farmer in the point of view taken up by Dr Thomſon, but deſcribed him as a perſon ſecluded from ſociety, and deſtitute of information. The following paſſages we extract as a ſpecimen.

" From the progreſſive improvements in the ſcience and practice of agriculture, which have been going forward during the laſt twenty or thirty years, the condition and circumſtances of the farmers have experienced gradual alteration for the better. And their growing affluence, co-operating with the general progreſs of luxury and refinement through the nation, have had a very viſible effect upon their manners and habits of life. Formerly, it was cuſtomary for the farmers to ſubject themſelves to every kind of drudgery and hard labour, undergoing the ſame toil, and often eating at the ſame table, with their ſervants. And, in ſome inſtances, this may be the caſe ſtill, eſpecially where their farms are ſmall, their circumſtances narrow, their rents high, and conſequently cannot afford to exempt the maſter from perſonal labour. But many of the farmers now occupy a more reſpectable and important ſtation. Their chief buſineſs is to ſuperintend. The operative and ſervile part is committed to others; but the maſter's preſence and direction are everywhere

where to conduct and forward the various neceſſary operations, in every department, and in their proper ſeaſon. Theſe requiſite attentions, together with the buſineſs of the counting-room, and his attendance on markets, for the diſpoſal of his grain and cattle, (a province which he uſually reſerves to himſelf), will afford little time for relaxation or idleneſs, and are ſurely much more conducive to his intereſt, than holding the plough, thraſhing the grain, or filling and driving his own dung-cart.

" The alteration in their ſtyle and manner of living, is equally remarkable. Their houſes, in general, are decently and ſubſtantially furniſhed, and the apartments ſo arranged, and the general economy of the houſe ſo regulated, as to produce a more marked diſtinction between maſter and ſervant, and to put an end to that indiſcriminate intercourſe, in reſpect of ſitting and eating, which was common in former times. Though many of them continue to be moſtly ſupplied with neceſſary maintenance from the produce of their farms, and to be clothed with their own manufactures, there are few who do not indulge, more or leſs, in the luxuries of life. Butcher meat is much commoner now than formerly; and their Sunday's dreſs, at leaſt, is furniſhed from the ſhop. The univerſal uſe of tea, as an article of living, need not be mentioned, as there is ſcarcely a cottager's houſe in the county, where it is not to be found. It is to be obſerved, however, that between the great body of the farmers, and thoſe who rank in the higheſt claſs, there is, in this reſpect, a very remarkable difference. Several of this laſt deſcription are men, not only in eaſy, but affluent circumſtances; men who have had the advantage of a liberal education, and whoſe manners, from their intercourſe with the world, have acquired a ſuperior poliſh. Correſpondent with theſe circumſtances, is their ſtyle and manner of living, the elegance of their furniture, the economy of their table, and the quality and faſhion of their dreſs. Thus diſtinguiſhed by education, fortune, and manners, they hold a moſt reſpectable place in the community, and are entitled to be conſidered as one of the intermediate links, which, in the gradations of rank and opulence, connect the higher and lower orders of men in ſociety."

We cannot agree with Dr Thomſon as to the propriety of paying rent in kind, even upon the ſuppoſition that the *ipſa corpora* was not to be delivered, but to be paid for in money, according to the rate of the fiars. If ſuch a mode had been common this year, three fourths of the tenantry would have been reduced to bankruptcy; it being evident that the rent,

rent, under such a regulation, would uniformly be greatest when the tenant was least able to pay an advance. Let us suppose that two bolls of grain (no matter of what kind) was the average rent of arable land, and that this, in ordinary years, amounted in money to 1l. 10s., which might undoubtedly be paid when a fair crop was procured. But reverse the case, and suppose that adverse circumstances had occasioned a failure of the crop, to the extent generally calculated this season, viz. three eighths; which failure would lessen the tenant's sales perhaps three-fourths, the same quantity as usual being required for seed corn and home-consumption. Now it might happen, and we are certain it has happened during this same year, that the tenant had not a quantity of produce to sell equal to the value of the *ipsa corpora* he was bound to pay the landlord, independent of the sums necessarily required for defraying the expences of his farm, which, in unfavourable years, are always augmented; whereas, had the rent been paid in money, the extra-price received for the bolls sold, might have compensated for the deficiency of his sales. Land is disposed of in perpetuity for money, and why should not its annual value for a limited time be ascertained in like manner?

We differ from the opinion given p. 145, respecting the proper breadth of ridges upon wet soils; being experimentally convinced that narrow ridges are pernicious in the extreme, in such situations. Where the soil is of sufficient deepness to bear three gatherings from the flat, without impoverishing the furrows, twenty-four feet is an excellent breadth; under different circumstances, they ought never to be less than eighteen feet; for all wet lands require a degree of acclivation not to be gained with propriety upon a lesser breadth. Casting is a bad method of ploughing, if it can be avoided, and is as seldom resorted to by good farmers as possible. If cross-ploughing was more practised, there would be little cause for the casting of ridges, where a suitable rotation of cropping is adopted.

An extensive improvement upon the Lomond-hills, formerly attached to the palace of Falkland, but now the common property of the surrounding heritors, is very properly recommended. From the nature of the law of 1695, we suspect it will be found necessary to apply for a particular act of Parliament, before this valuable subject can be divided. The following extracts will shew the loss sustained by allowing this commonty to remain in its present state.

" The following information, afforded me by a neighbouring heritor, appears to place the matter in a new and important point of view, and ſhows how highly advantageous the diviſion of this commonty would be to all concerned.

" This gentleman has lately incloſed about 170 acres of ground, contiguous to, and of very much the ſame quality of ſoil, with the Lomond hills. This ground, in its former ſtate, yielded a rent of little more than 15d. the acre. Laſt year, he let it as a graſs park, for fifty guineas; and this year, although one of the moſt unfavourable ſeaſons experienced for a long time paſt, it has maintained above ſeventy head of cattle.

" From the above experiment, this gentleman makes the following calculations: The Lomond hills are of a quality no way inferior to the park above mentioned: therefore he reaſonably concludes, that, in a divided and incloſed ſtate, they would maintain above 1400 head of cattle; if grazed with ſheep, the profits would probably be ſtill greater: a very different return, indeed, from that which the proprietors now draw from it, in its preſent neglected ſtate. He concludes with obſerving, that the hill abounding with limeſtone and freeſtone quarries, the expence of incloſing would not be heavy."

Dr Thomſon appears to poſſeſs juſt ideas reſpecting the utility of *lime*, when uſed in huſbandry. He conſiders it in the light of an *alterative*, which we have always found it to be, in the courſe of our practice.

A very accurate deſcription of the Fife breed of cattle is given, chap. 13th A great proportion of the county being adapted to the breeding and rearing of young ſtock, it is undoubtedly a matter of importance that ſuitable attention be paid to the ſelection of a proper breed. Dr Thomſon ſtates, upon the authority of a dealer, that a Fife bullock of forty ſtones will bring an equal price, in Smithfield market, with an Engliſh bullock ten ſtones heavier, and equally fat; and that they are generally ſelected by the butcher for the moſt luxurious of his employers. An engraving of a fine bull lately in the poſſeſſion of the Earl of Leven, and bred by Mr Robert Ruſſel, one of his Lordſhip's tenants, is given, which conveys a very favourable idea of the properties of this valuable breed.

Dr Thomſon is friendly to the working of oxen, in preference to horſes, though he candidly acknowledges that the general opinion is in favour of the latter, and that " there is not perphaps one ox employed at preſent, in the plough or cart,

cart, for ten that were uſed twenty years ago;" a fact we ſhould conſider as deciſive upon the ſide of horſes; for the greateſt part of mankind are ſharp enough ſighted in ſuch matters, to chooſe always what is moſt conducive to their own intereſt. If oxen had never been wrought, their utility would have been problematical; but when they were at one time the uſual beaſts of labour in this country, and have regularly been laid aſide as improvements were introduced, a doubt can hardly be entertained reſpecting the ſuperiority of horſes.

We are ſorry that the nature of our work prevents us from doing juſtice to that portion of the report which treats upon the ſituation of the *parochial ſchoolmaſters*. Animated with the ſame ſentiments which influenced Dr Thomſon upon this occaſion, we join him in reprobating the ſcheme of depriving the lower ranks of the benefit of education, as inconſiſtent with ſound policy and productive of the moſt ſerious miſchief to the ſtate. The caſe of the parochial ſchoolmaſters deſerves the commiſeration of the landed intereſt; as at this time their general ſituation is much worſe than the meaneſt labourer. If it was neceſſary and proper for the Parliament 1696, to ordain that they ſhould be provided with ſalaries, very probably ſuited to their ſtation according to the value of money at the time, it certainly, under exiſting circumſtances, is equally neceſſary and proper that theſe ſalaries ſhould be advanced in a proportional manner to the riſe that has taken place upon the neceſſaries of life; otherwiſe, *after the preſent incumbents are ſtarved out*, the office will remain unſupplied, or be filled with perſons incapable of educating the riſing generation.

The *ſhort endurance of leaſes*, is ſtated as one of the greateſt obſtacles to improvement; and it is really ſurpriſing that proprietors ſhould ever expect that their lands will be improved, by perſons who have not a ſuitable intereſt in the iſſue of ſuch improvements. We have always conſidered this queſtion in a public point of view, unconnected with the benefit of private parties, unleſs ſo far as their exertions were neceſſary to inſure a general advantage. If land, therefore, is held under a ſhort tenure; if reſtraints are impoſed upon the activity of the tenant; if he is prevented from cultivating and improving the ground in his hand, in ſuch a way as to render it capable of returning the greateſt quantity of produce; then the public intereſt is injured, and the capital ſtock of the country is leſſened and deteriorated.

Lord KAMES's *plan of a leafe* has been much applauded: but it was left to Dr Thomfon to fhew the reafon why it has not found its way into general practice. While fuch a mode of leafehold is evidently advantageous to the public good, becaufe it promotes improvements, it certainly is prejudicial to the landlord's intereft, upon the account here affigned, viz. that it throws into the tenant's hands every benefit that may arife from an increafe in the value of produce, or, which is the fame thing, from a fall in the value of money We have not heard this objection offered before; and acknowledge the force and propriety of it.

Dr Thomfon confiders *road-money*, even when the tax is impofed during the currency of a leafe, as no material hardfhip upon the tenant; becaufe the advantages derived from the improved ftate of the roads, do more than compenfate for the duties they are liable to pay upon this account. While we are fully fenfible of the eminent benefits procured from the poffeffion of good roads, and acknowledge that no tax whatever, fo far as it includes his real fhare, ought to be paid with greater cheerfulnefs by the tenant, we feel ourfelves obliged to remark, that the Doctor's difcernment has here been rather afleep. Do not good roads contribute as much to the improvement of an eftate as any other local advantage? and if thefe roads are repaired at the expence of the tenantry, which is the principle of all our ftatute-labour acts, does not the eftate become confiderably improved at the concluſion of the leafe, without the expenditure of a halfpenny by the owner, but at the fole expence of others? If the ftatute-work was equally divided, like poor-rates, and other public burdens, the one half payable by the proprietor, and the other half by the poffeffor, no caufe of complaint would remain; the tenant's proportion would be reimburfed by the fuperior facility with which he paffed the roads during the currency of his leafe, while the proprietor would be compenfated by the increafed value of his eftate.

A very refpectable lift of fubfcribers is annexed to the work; and it gives us much fatisfaction to learn, that a fecond edition is in contemplation. We cordially offer our beft wifhes for its future fuccefs, being fully convinced that it is in general executed upon liberal principles, and with an ardent defire to promote an object of primary importance, viz. the Profperity of Britifh Agriculture. N.

General View of the Agriculture of the West Riding of Yorkshire.

(By a GENTLEMAN in Yorkshire.)

Continued from p. 207.

HAVING conſidered the firſt ſeven chapters of this work with much attention, we now proceed to examine its remaining parts. Indeed, we can hardly beſtow too much pains in analyzing a performance which ſo fully deſcribes the agriculture of a diſtrict deſervedly ranked as the firſt in the kingdom.

Chap 8. *On Graſs*, has ſome remarks on the rich old paſtures of this Riding, particularly thoſe in the diſtrict of Craven, many of which might be broken up for corn, to the advantage of the community; but it is nearly certain, that little or nothing of that ſort will be done during the continuance of the tithe ſyſtem. In the words of the author, "Before any of theſe rich fields can be broke up, the tithe ſyſtem muſt undergo a change; as it would be a notable affair for a tithe-holder to have a tenth of the weighty crops they would produce. From reſpectable authority, we learned, that the payment of tithes was, in a great meaſure, the cauſe of laying theſe fields totally in graſs, and that this tax continues to operate as a prohibitory reſtriction againſt breaking them up." A pregnant proof, if proof be wanted, of the incalculable miſchiefs of this tax; for a vaſt treaſure of uſeful induſtry, and circulation of grain, and other products uſeful to man, are, by this ſyſtem, entirely locked up and loſt to the community, which might otherwiſe be brought forward, without any diminution of the ſtock of cattle maintainable on the ſame ground. In theſe ſeaſons of ſcarcity, bordering on famine, which, if the tithes continue as they are, muſt be almoſt periodical, can a warning voice be neceſſary to rouſe to a ſenſe of danger and duty, thoſe who have the power to remedy this abuſe?

An obſervation, in page 118, will excite ſome ſurpriſe—"Clover by itſelf always makes bad hay:" Now, in many parts of the country, clover is ever eſteemed as moſt valuable fodder, at leaſt for horſes, if not for all other cattle

Chap. 11. *The incloſure of waſte and unimproved lands*, is again more particularly recommended; and an excellent Scotiſh

law for that purpoſe brought forward, which might be of great utility in England.

The remarks on this intereſting ſubject are ſupported by the notes of ſeveral correſpondents; but the chapter is principally occupied by a moſt valuable and circumſtantial paper, communicated by Robert Stockdale, Eſq. on the celebrated incloſures of the foreſt of Knareſborough, ſtating the difficulties attending the diviſion of above 33,000 acres, with a candid and inſtructive account of his own errors, and final ſucceſs, in the cultivation and improvement of a moſt rugged and unpromiſing allotment, which appears to have been of conſiderable extent. This paper may be of infinite uſe to future adventurers in the ſame tract. A note at the end of this chapter ſays, "Great part of the waſte lands call loudly for improvement, by the plough and the ſpade. May the call be obeyed, leſt we *fight*, and *weave*, and *hammer*, till we have not *bread* to eat." How does this, written in 1795, digeſt in 1800.

Chap. 12. *Improvements* are here alluded to, ſuch as drainings, irrigations, paring and burning, liming and warping; all articles of moment. The ſubject of draining is very ſparingly treated: ſome further obſervations on the beſt modes of conducting the works in open and covered drainages, would have been acceptable. Irrigation is recommended in proper ſituations; but it is acknowledged to be an expenſive and difficult work. The paring and burning of all ſwards, indiſcriminately, are not adviſed by the ſurveyors. YOUNG, on the contrary, ſays, it is a moſt beneficial practice in general, as it is found by experiment not to reduce the quantity of ſoil, nor to deteriorate its quality; but, by converting the turf into a manure, inſtead of its being turned down as a nidus for various reptiles, ſo deſtructive to the common roots, &c. it is approved of by him as a ſafe and beneficial practice. In the ſection on *manures*, there is an obſervation, which will not a little ſtartle the cow-keepers, &c. viz. "Dung ought not to be laid upon the graſs fields; which, properly ſown down, will ſufficiently improve themſelves!" To a grower of hay for cows, &c. this would ſeem incomprehenſible; but it is in ſome ſort explained in a note on old meadows, where it is ſaid, "The ſurveyors deteſt this mode of raiſing hay." Nowithſtanding ſome well founded objections to old ſwards in general, meadows of this deſcription will be valuable, while their produce of milk and butter are ſo much in demand as they now are: and while, by good management

management and manure, they can be brought to yield from one to two tons of excellent hay per acre, ſucceeded by fog or after-graſs, worth from 1l. to 3l., the occupier of ſuch meadows ought well to conſider, before the attempt of breaking them up, whether he can, by the plough, increaſe their value, eſpecially where corn tithes are taken in kind. The rents of theſe lands are, in general, by much the higheſt of any in the Riding. On *Lime*, the theory laid down is perfectly conſiſtent with the reſult of the beſt conducted experiments on that important ſubject; particularly thoſe of Anderſon, Dundonald, and Hunter. It is accordingly treated as a ſtimulus only to other manures, or the remains of animal and vegetable ſubſtances previouſly in the ſoil, but, without the addition of this ſtimulant, perfectly inert and uſeleſs to vegetation: on theſe principles, it is evident much lime is miſapplied, if not thrown away. Many pertinent and judicious hints occur, on the beſt methods of applying lime, well ſupported by facts adduced by correſpondents; and, on the whole, this ſection contains much inſtruction, on ſafe and tried principles.

Several papers on the *warping of land*, as practiſed, for ſome time paſt, in the ſouthern parts of the diſtrict, throw much light on the ſubject, and will be curious and informing to the inhabitants of the northern parts of the county. This operation is a moſt ingenious effort of human induſtry. What wonders would it not perform, if encouraged! what a garden might Britain ſoon be, if permitted! Hundreds of thouſands of acres of land on the coaſts, well adapted to this ſignal mode of improvement, are, to our certain knowledge, loſt to the community, in conſequence of one or other of the obſtacles already inſiſted on.

Chap. 13. Here are ſome notices on the ſoiling of cows and horſes on mown graſs, &c. during the Summer months, a practice highly meritorious; the benefits of which practice are by many ſuppoſed to be more ſtrikingly in favour of working horſes, than even of cows. The ſurveyors ſpeak favourably of the long horned breed of cattle; but many of the moſt attentive breeders in the Weſt Riding, will prefer the Durham, or ſhort horned kind, in moſt ſituations, as producing an animal of better proof, when fattened, more productive in milk, the oxen more fit for labour, and, on the whole, as a race better adapted to the climate, than the formerly ſo much admired Lancaſhire or Craven breed: but it muſt be obſerved, a ſtrong diſtinction is and ought to be

made between the Durham and Holderneſſe ſpecies, which are, in the ſurvey, in ſome degree confounded, or at leaſt not treated as diſtinct breeds. Of ſheep, the ſort moſt valued by the ſuperior improvers, appears to be the new Leiceſterſhire or Diſhley breed.

In Section 3. the merits of *Oxen* for draught are diſcuſſed, and, in our opinion, they are too haſtily decided againſt; for we are confident, from fair experiment, that a good ox will do as much work as a heavy draught horſe, the pride of the modern farmer; and, unleſs he will ſo far conquer his prejudices, as to fatten and eat his heavy horſe when diſabled, the queſtion will not bear a debate. The vaſt increaſe of horſes during the laſt century, is believed, by many, to be among the cauſes, that the comparative ſupply of proviſions for market, has not kept pace with the boaſted agricultural improvements of the ſame period. Section 7. *Dove cots* are ſeverely denounced as nuiſances, proper for extirpation. We allow there may be "too much even of a good thing;" but ſince we know of little or no damage actually done by this beautiful winged ſpecies of live ſtock, except on lodged corn, and at or a little before the harveſt; and as they are of ſome value, beſides leaving an excellent manure; we are not inclined to condemn them to utter extermination, without further inquiry into their alleged demerits. Yet ſome of the remarks on this ſubject may be juſt. Where vaſt numbers are kept, they are doubtleſs nuiſances; of which a ſtrong proof exiſted in France before the Revolution, where the agriculture of whole diſtricts was diſcouraged, if not deſtroyed, by myriads of thoſe birds, preſerved and encouraged, at the expence of the cultivators, by the moſt tyrannous reſtrictions.

Chap. 14. On *Rural Economy*, has ſome notices by a correſpondent in ſect. 1. on the ſubject of *Labourers*, which appear to indicate, that the ſituation of that indiſpenſably uſeful body of men, is rather deteriorated, than otherwiſe, notwithſtanding the improvements of the preſent period. If theſe improvements are conſidered only as properly centering in and ſupporting a ſyſtem of high rents, high rates of proviſions, &c. &c. the majority of the moſt uſeful members of the community cannot have reaſon to join the loud plaudits of thoſe improvements, which we ſo frequently hear echoed and re echoed from every quarter: And why farmers, in general, ſhould lean more to high rents, &c. than

to

to adequate wages of rural labour, is a problem of difficult ſolution, on any fair principles.

Chap. 15. The *Roads* of the diſtrict, though much is done upon them, are, too, generally bad, from the ſoftneſs af the materials, &c. A remark here againſt the uſe of waggons, and in favour of light carts, will not be reliſhed by many, yet poſſibly it may be juſt. Section 3, contains liſts of *Fairs and Market Towns* within the Riding. The reaſoning againſt the "*propoſal of ſome wild imaginations*," that *all* grain ſhould be ſold in the public markets, is perfectly concluſive; indeed, the inſanity of ſuch a propoſal is ſelf-evident.—In Section 4. the leading *Manufactures* of the diſtrict are briefly noticed: and ſome hints occur on the partial occupation of land by manufacturers. We are moſt clearly of the opinion, that, where manufacturers can be accommodated with land in ſmall parcels, for their convenience and relaxation, this mode of occupation is highly advantageous to individuals, and to the community, in every reſpect. In Section 5. on the *Corn Laws*, our ſurveyors juſtly obſerve as follows:—

'From the beginning of this century, to the year 1756, the corn laws were allowed to operate without any ſuſpenſion; but the crop of the above year being rather defective, an act of Parliament was paſſed, whereby exportation was ſtopped during the year 1757. In 1766, upon an application from the Lord Mayor of London, the Privy Council aſſumed the power of iſſuing a proclamation for ſtopping exportation, which was emphatically called by the late Earl of Mansfield, "the forty days tyranny;' and and, ſince the year 1773, the corn laws, like Proteus, have aſſumed ſo many various ſhapes, no regular ſyſtem being adhered to, as to throw the whole trade into confuſion and diſorder.'

Chap. 16. *Miſcellaneous Obſervations.* The following remarks on *Agricultural Societies*, we will extract:—

'As improvements in agriculture very often locally take place, and are ſlow in travelling from one part of the country to another, we ſhould eſteem the inſtitution of ſocieties, upon proper principles, an excellent method for diſſeminating knowledge in this ſcience. If theſe ſocieties were to correſpond with one another, every new improvement, either in cultivation, ſtock, or huſbandry utenſils, that was deviſed in one part of the country, would be immediately

immediately known in its moſt diſtant parts. For want of theſe means of communication at preſent, the great body of farmers are almoſt as ignorant of what their brethren in other counties are doing, as if they lived in a foreign land.

'In conſtituting Agricultural Societies, we are far from recommending an intermixture of proprietors and farmers together. It is abſolutely neceſſary, for many obvious reaſons, they ſhould be ſeparate. Without dwelling upon theſe, it may only be ſaid, that, in preſence of a landlord, ſome farmers are ready to be diffident, and will not propoſe their opinions in that free and unreſtrained manner they would do in the company of their brethren and equals. We heard of the Sheffield ſociety, where gentlemen, clergy, and farmers, met promiſcuouſly; the conſequence of which was, that the latter were in a manner prohibited from mentioning improvements, in caſe they ſhould be a watch-word for the one to increaſe the rent, and the other to raiſe the rate of tithes.'

In regard to the troubleſome and long complained of diverſity of *Weights and Meaſures* in this country, the obſervations here made are judicious, and well deſerving the attention of thoſe who might apply a remedy. It is the decided opinion of the ſurveyors, that corn ought uniformly to be ſold by weight: a number of objections have been made, which are eaſily repelled.

In chap. 17. *Obſtacles to Improvement* are brought forward; very important objects for conſideration. In the firſt place, the ſurveyors ſay, "We account it as demonſtrable as any propoſition in Euclid, that no real improvement can take place in regard to the waſte lands of this diſtrict, without a previous diviſion; and it is nearly as certain, that, without a general law being paſſed at once, for the whole kingdom, their diviſion, according to the preſent ſyſtem, will never be accompliſhed." Here follows the humble petition, at length, of the freeholders, to the lord of a manor in the Weſt Riding, which offers a plain ſtatement of the preſent, almoſt inſuperable, difficulties attending the incloſure of waſtes, &c. ſo imperiouſly demanded by the "*exiſting circumſtances*" of this country. Archdeacon Paley is quoted at ſome length, in corroboration of the remarks of the ſurveyors. The *Tithes* are here alſo briefly mentioned as obſtacles to improvements of almoſt every kind; the difficulties of ſettling which, in incloſures, form the ſtrongeſt barrier againſt

againſt the cultivation of the waſtes. The want of *Leaſes* comes again into view as a ſignal diſcouragement, which is well illuſtrated by a correſpondent, whoſe deſcription of his own caſe muſt excite the ſympathy of every cultivator. The *Limitations* upon *Management*, which obtain in many places, are juſtly conſidered as obſtacles in the way of every experienced improver: for, as here ſtated, the tenant, under ſuch reſtraints, and without a leaſe, is but a ſteward on his farm, if not a *ſlave*. Throughout the whole of the reaſoning on the aſſigning or ſubſetting of land, and the various aſpects of the relation of landlord and tenant, the author appears to point to a degree of independence, on the part of the tenantry, abſolutely incompatible with the actual ſtate of things; for if all the tenants had leaſes, what would become of the influence of landlords, in elections for Parliament, &c. the purity of which we are ſo much intereſted in preſerving? Yet a clauſe in the leaſe might provide againſt this offence; but then other modes of dependence, attaching to tenures at will, ſtand unfortunately in the way of leaſes. The ſmall ſize of farms is alſo mentioned as an hinderance to improvement; and while every little arable farmer muſt have a team of heavy horſes, devouring a great proportion of his produce, there is not a doubt about it, but ſmall graſs farms are much wanted in many parts of the Riding, for which there is every encouragement, from the conſtant high price of their products, and the conſequent high rate of the rental.

Chap. 18. is on the *Means of Improvement*, which we introduce in the author's own words:

"Agriculture is the parent of all the arts, and the practice of it may be conſidered as a ſtandard for the flouriſhing of others. It has, for ſome years paſt, been a principal object in the ſeveral governments of Europe, to frame laws and regulations for its encouragement; and the eſtabliſhment of a Board for promoting Agriculture and internal improvement, ſhews it is not neglected in our own country. We have, in the foregoing parts of this work, ſubmitted to the conſideration of that Honourable Board a ſtate of the huſbandry in this Riding: and alſo pointed out, for their information, the principal obſtacles which are in the way of further improvements: We now proceed to ſuggeſt how theſe obſtacles may be removed, and what alterations ought to be introduced into the huſbandry of the diſtrict.

"The

" The improvements we ſuggeſt are :

" *1ſt*, That the nature of the connexion betwixt the landlord and the tenant ſhould be changed, and leaſes of a proper duration granted.

" *2dly*, That the arbitrary and injudicious covenants generally impoſed upon the tenantry, ſhould be diſcontinued, and conditions, more favourable to improvements, ſubſtituted in their ſtead.

" *3dly*, That tithes ſhould be commuted.

" *4thly*, That a general bill ſhould be paſſed by the Legiſlature, for the diviſion of the common fields and waſte grounds.

" Theſe are the leading means of improvement; without which no material encouragement can be given to the huſbandry of the diſtrict. In hopes that the Board of Agriculture will conſider them in the ſame light, we proceed to recommend,

" *5thly*, More improved rotations of crops.

" *6thly*, Breaking up the old paſture fields, and frequent changes of corn and graſs.

" *7thly*, Drilling and horſe-hoeing beans and turnips.

" *8thly*, Planting the waſte lands which are improper for cultivation."

Under the head of more improved rotations of crops, after having premiſed a variety of intereſting particulars, indiſpenſible to the management of a good farm, ſome valuable hints are offered on the beſt mode of cultivating land, and raiſing crops on different ſoils.

The drilling and horſe-hoeing of *Beans* and *Turnips*, and thoſe crops only, is ſtrongly recommended as a real improvement. On planting certain parts of the waſtes, it is obſerved that it ought to be " a material object with every well regulated government, that no part of its territory be allowed to remain unproductive, but that every acre of it ſhould be employed to ſome uſeful purpoſe or other. If the ſoil is the capital ſtock of the country, as ſeveral political writers have maintained, the intereſt of the country is neglected when any part of it is allowed to lie in a ſtate of ſterility.

ſterility. There is no part of the earth but what may be adapted to ſome uſeful purpoſe or other; and, as there is a conſtant demand for wood in the Weſt Riding, the proprietors are called upon, both by public and private motives, to plant every acre, not capable of being improved by the ordinary methods of cultivation."

The *Game Laws* are noticed, and the privilege of hunting is thus feelingly commented on:

"It really ſhocks the feelings of a farmer, to notice the injuries committed by a parcel of people, mounted on horſeback, galloping like madmen after a poor fox, or an innocent hare. We are convinced, that no *real* gentleman will injure the property of the farmer, when engaged in this *diverſion*: but, ſo it happens, that heavy loſſes are often ſuſtained by thoſe over whoſe fields the object of ſport happens to run; fences are tumbled down, the ſown wheat fields rode over, the young graſſes not ſpared; and, in ſhort, every thing muſt make way for theſe ſons of Nimrod."

Theſe remarks ought to engage the attention of the preſent ſupporters of thoſe purſuits, more appropriate to a ſavage and uncultivated ſtate of mankind.

Having now carefully reviewed the various parts of this intereſting ſurvey, we give the concluſion of it in our author's own words:

"We ſhall now bring this ſurvey to a concluſion. In the courſe of it, we have endeavoured to deſcribe the ſtate of huſbandry in the Weſt Riding, as it is actually carried on and this we have done, not only from a minute examination of its different branches, and the information collected during the time we remained in the Riding, but alſo for the very liberal communications of ſeveral intelligent gentlemen and farmers, ſince tranſmitted to us. It certainly has given us much pain to be under the neceſſity of cenſuring ſeveral prevailing practices, and to ſay ſo much againſt the nature of the connexion which at preſent generally ſubſiſts betwixt the proprietors and their tenants. Upon theſe matters, we have ſtated our ſentiments with freedom, becauſe we are ſenſible of their importance; and have uniformly acted upon this maxim, that "thoſe who are afraid of the public, are not the men by whom the public is to be ſerved."

"With regard to the intereſt of that uſeful body of men the farmers, we have endeavoured to ſhow how much their ſituation would be meliorated, and the practice of agriculture improved, by the proprietors granting leaſes of a proper duration, free

free of thoſe uſeleſs reſtrictions and covenants that now ſubſiſt in agreements for land, whether annual, or for a greater number of years.

"Theſe things we humbly ſubmit to the conſideration of the Board of Agriculture; and we entertain a ſanguine hope, if the improvements we have ſuggeſted are ſanctioned by their approbation, that this ſanction will have great influence in correcting the abuſes we have deſcribed, and contribute to improve the huſbandry of the Weſt Riding of Yorkſhire; by which means the intereſt of the landed proprietor will be augmented, the peace and happineſs of the farmer increaſed, and conſequently the public good materially promoted.

There is a copious Appendix to the volume, of which No. 1. contains 49 pages of extracts from the journals kept during the ſurvey, which forms a very proper, uſeful, and amuſing addition to the work; and the facts obſerved during the tour through the Riding, afford comments corroborative of the principles laid down in the ſurvey. No. 7. exhibits a curious, but melancholy picture; a ſtatement of the waſte lands in Yorkſhire, calculated by John Tuke, land-ſurveyor, by which it appears they amount to 849,272 acres, of which 405,272 acres are in the Weſt Riding alone; being above one-fourth of the whole ſurface of the diſtrict. Moſt of theſe lands are now exiſting as nuiſances; while this country has been for many years importing grain to a very large amount; while, in ſome of thoſe years, the common products of our ſoil, the abſolute neceſſaries of life, have been ſcarcely acquirable by the lower claſſes; and while even ſeveral awful warnings of famine have been given. May theſe warnings have their effect, in calling forth the utmoſt efforts of thoſe who have the power to remove every obſtacle to the extenſion of our agriculture, and the conſequent increaſe of the ſtock of the neceſſaries to human exiſtence, before it be too late; for by no other means can even property itſelf remain ſecure, notwithſtanding the objections of the half-learned ones in this important branch of political economy. No. 9. is an account of the different townſhips in the Wapentake of Claro; a ſimilar account of the whole Riding would have been acceptable; it includes a ſhort ſketch of the actual management of the proprietors, &c, in each place. No. 10. and laſt, gives ſtatiſtical information reſpecting many pariſhes in the Riding, which appear to have been gathered from the replies to the queries ſent ſome years ſince to the clergy of the different pariſhes.

We

We have here an eſtimate of the number of acres in each pariſh, of their various application to corn, graſs, &c.; courſes of crops, and number of inhabitants. Theſe may furniſh moſt uſeful and intereſting documents for future obſervers on the ſtate of this important diſtrict.

On the whole, this General View of the Agriculture of the Weſt Riding of Yorkſhire—for diligent reſearch, candour and liberality, in the ſelection of matter from correſpondents, as well as in the imparting of advice and opinion; for the able and maſterly manner in which the account is drawn up, and, above all, for the ſound and practical knowledge pervading the whole work—merits the warmeſt acknowledgments of the inhabitants of that diſtrict in particular, and will obtain a diſtinguiſhed place among the ſurveys of the other counties. We conclude our review of this article, with lamenting, that the Board of Agriculture ſhould have reſtricted the ſurveyors, generally, from the diſcuſſion of the ſubject of *tithes*, in compariſon with which, every other obſtacle to the agricultural improvement of this country, is but as a *molehill to a mountain.* W. P.

Travels through the United States of North America, by the Duke de la Rochefoucault Liancourt, *Vol.* 2. 686 *pages*, 4*to*. London, *Philips*, &c. 1799.

A considerable part of this volume is devoted to a deſcription of the conſtitution, government, laws, commerce, and manners, of the United States; which ſubjects are foreign to the general purpoſes of this work: But wherever the noble author enters upon agricultural details, we diſcern the ſame propriety of deſcription, and juſtice of remark, as were ſtrikingly diſplayed in the firſt part of this valuable and important work.

We lament ſincerely that our limits preclude us from examining ſuch an intereſting publication with that minuteneſs which it deſerves. We ſhall therefore confine ourſelves to a brief ſketch of the different routes taken by his Grace, extract one or two paſſages illuſtrative of American huſbandry, and conclude with a few remarks upon the preſent ſtate of rural œconomy in the United States.

After

After a moſt diſagreeable and dangerous paſſage from Charleſtown in South Carolina, the Duke de Liancourt landed at Norfolk in Virginia, where a conſiderable trade is carried on with Europe, the Antilles, and the Northern States. Agriculture can hardly be ſaid to exiſt in the neighbourhood of Norfolk, and, with a few exceptions, is imperfectly practiſed throughout the whole of this extenſive State. Having viſited the moſt diſtant parts of Virginia, his Grace croſſed the Potoumack, and entered into Maryland, which appears rather worſe cultivated than the former State.

The ſecond tour is to the Northern States; and his Grace travelled in the ſtage from Philadelphia to New-York, where, in company with his old fellow-traveller Mr Guillemard, he took ſhipping for Providence, in Rhode Iſland. Being, by an adverſe wind, forced into Stonington, State of Connecticut, he examined the huſbandry of the neighbourhood, which is chiefly confined to paſturage and rearing young cattle. Afterwards they paſſed to Newport and Boſton—paid a ſecond viſit to General Knox at Thomaſtown, in the diſtrict of Maine, whoſe extenſive undertakings are amply detailed. Returning to Boſton by water, his Grace proceeded to Portſmouth, in New Hampſhire, and gives a comprehenſive account of the conſtitution, laws, and commerce of that province.

Viſiting Boſton a third time, the Duke journeyed through the inland parts of Maſſachuſets, of which the deſcription is generally very favourable. He entered the State of New York, about nine miles from Stockbridge; and, after examining the lands upon the ſide of Hudſon's river, and giving a particular account of the eſtate of Major Prevoſt, ſon of General Prevoſt, who commanded at Savannah when that place was beſieged by Count d'Eſtaing, he arrived at New York, which concludes the ſecond tour.

His Grace, on the 26th March 1799, ſet out on his third tour, the object of which was to viſit the Federal city, henceforth deſtined to be the ſeat of government. Paſſing the Schuylkill, he travelled by Cheſter and Wilmington to Brandywine, where from 60 to 80 mills are erected, chiefly for the manufacture of paper, gun powder, and flour. The conſtitution and laws of the Delaware ſtate is next deſcribed; and, after making ſome obſervations upon Lower Maryland, he croſſed Cheſapeak bay, and arrived at Annapolis.

Federal City, the ſite of which extends three miles along the banks of the Potoumack, including 4120 ſquare acres, from

from the accounts here given, appears to have been planned out upon too expenſive a ſcale for the circumſtances of the country; to the proſperity of which, the ſinking ſuch an immenſe ſum of money upon non-productive works, was certainly a matter of the utmoſt magnitude. In the execution of the deſign, a groſs error ſeems to have been committed, by erecting buildings in all the different quarters at once, without finiſhing any thing like a ſtreet, or diſpoſing of the lots as buildings for the accommodation of the inhabitants were required. Ruinous ſpeculations were the certain conſequence; and by far too much of the capital ſtock of America has been unneceſſarily expended, in erecting what is meant in future to be their capital city. His Grace's obſervations on theſe matters are ſo juſt, that we recommend them to the attention of our readers. It appears, however, from a late motion in the American Senate, that he has erred in his prediction, that government would not remove to this place at the time fixed by the original law in 1790.

Leaving Federal City, the Duke paſſed on to Baltimore, which has increaſed prodigiouſly ſince the peace in 1783, and is now the third commercial town in America. Croſſing the Suſquehannah, he arrived at Elktown, and from thence proceeded to Philadelphia.

A very full and liberal account of the State of Pennſylvania is next given, which is well worth the peruſal of every perſon who takes intereſt in the welfare of mankind.

The fourth tour is through part of Pennſylvania and States of New Jerſey. A hiſtory of the colony of New York is preſented, which is followed by an intereſting account of its preſent conſtitution, trade, finances, manners, &c. A variety of general obſervations on the United States conclude the work.

We ſhall now extract two paſſages, which will throw conſiderable light upon American huſbandry.

Speaking of Mr Jefferſon's eſtate at Monticello, in the chain of mountains which ſtretches from James's river to the Rapahannock, his Grace ſays:

"Mr Jefferſon has divided all his land under culture into four farms, and every farm into ſeven fields of forty acres. Each farm conſiſts, therefore, of two hundred and eighty acres. His ſyſtem of rotation embraces ſeven years; and this is the reaſon why each farm has been divided into ſeven fields. In the firſt of theſe ſeven years, wheat is cultivated; in the ſecond, Indian corn; in the

third, peas or potatoes; in the fourth, vetches: in the fifth, wheat; and, in the ſixth and ſeventh, clover. Thus, each of his fields yields ſome produce every year; and his rotation of ſucceſſive culture, while it prepares the ſoil for the following crop, increaſes its produce. The abundance of clover, potatoes, peas, &c. will enable him to keep ſufficient cattle for manuring his land, which at preſent receives hardly any dung at all; independently of the great profit which he will in future derive from the ſale of his cattle.

"Each farm, under the direction of a particular ſteward or bailiff is cultivated by four negroes, four negreſſes, four oxen, and four horſes. The bailiffs, who in general manage their farms ſeparately, aſſiſt each other during the harveſt, as well as at any other time, when there is any preſſing labour. The great declivity of the fields, which would render it extremely troubleſome and tedious to carry the produce, even of each farm, to one common central point, has induced Mr Jefferſon to conſtruct, on each field, a barn, ſufficiently capacious to hold its produce in grain. The produce in forage is alſo houſed there; but this is generally ſo great, that it becomes neceſſary to make ſtacks near the barns. The latter are conſtructed of trunks of trees, and the floors are boarded. The foreſts and ſlaves reduce the expence of theſe buildings to a mere trifle.

"Mr Jefferſon poſſeſſes one of thoſe excellent thraſhing machines, which, a few years ſince, were invented in Scotland, and are already very common in England. This machine, the whole of which does not weigh two thouſand pounds, is conveyed from one barn to another in a waggon, and thraſhes from one hundred and twenty, to one hundred and fifty buſhels a day. A worm, whoſe eggs are almoſt conſtantly depoſited in the ear of the grain, renders it neceſſary to thraſh the corn a ſhort time after the harveſt. In this caſe, the heat, occaſioned by the mixture of grain with its envelope, from which it is diſengaged, but with which it continues mixed, deſtroys the vital principle of the egg, and protects the corn from the inconveniences of its being hatched. If the grain continued in the ears, without being ſpeedily beaten, it would be deſtroyed by the worm, which would be excluded from the eggs. This ſcourge, however, ſpreads no farther northwards than the Potowmack, and is bounded to the weſt by the Blue Mountains. A few weeks after the corn has been beaten, it is free from all danger, winnowed, and ſent to market. The Virginia planters have generally their corn trodden out by horſes; but this way is ſlow, and there is no country in the world where this operation requires more diſpatch than in this part of Virginia: Beſides, the ſtraw is bruiſed by the treading

treading of horſes. Mr Jefferſon hopes that his machine, which has already found ſome imitators among his neighbours, will be generally adopted in Virginia. In a country where all the inhabitants poſſeſs plenty of wood, this machine may be made at a very trifling expence."

The following bears much affinity to the deſcription of an old Engliſh townſhip:

"Stockbridge is one of the richeſt townſhips in the ſtate of Maſſachuſets. All its land is cultivated, except a very ſmall portion, which will ſoon, in its turn, receive culture like the reſt. No timber is here preſerved beyond what is requiſite for fuel. This townſhip is, for the moſt part, ſituate in a valley, but extends alſo upon ſome hills of no great elevation. The ſoil is excellent, and almoſt all laid down in meadow. The cattle, butter, cheeſe, and ſuch other productions as are not conſumed on the ſpot, are generally ſent to New York. Sometimes the certainty of obtaining a higher price at Boſton, induces the farmer to give a preference to the latter place; with which, however, the communication is difficult, becauſe of the diſtance, and of the mountainous country that is to be traverſed. In ſuch caſes, all the other articles, except the cattle, are ſent down to New York by the North River, which paſſes within twenty miles of Stockbridge, and tranſported from New York to Boſton by ſea."

We ſhall now offer one or two remarks upon the preſent ſtate of rural economy in the United States.

A line of diſtinction may be drawn betwixt thoſe ſtates commonly called Southern and Northern ones. In all the northern ones, property is more divided, the land better cultivated, and population generally more extenſive, upon an equal ſpace of ground. In the ſouthern ſtates, a great proportion of the inhabitants are ſlaves, which neceſſarily renders the ſyſtem of cultivation materially different. The northern ſtates appear to poſſeſs more of the comforts of life, and are much farther advanced in agricultural ſcience, particularly Connecticut and Maſſachuſets, than the ſouthern ſtates of Virginia, Maryland, Carolina, and Georgia, where a few individuals may be richer; but the great bulk of the people are dependent, ignorant, and uncivilized. In Virginia and Maryland, a change is rapidly taking place in the mode of huſbandry; for tobacco is yielding to wheat, which aſſuredly is a beneficial change; but it has given us much ſurpriſe to obſerve, that the crops of that grain are, upon the whole, very inſignificant, while the expence of cultivation is ſo great.

Very little attention ſeems to be paid to the important article of manure, which in general is too much neglected in the American States, and is a ſure proof that agricultural ſcience is but in its infancy.

It may be added, that the rate of labour will, for a long while, effectually preclude grain from being an article of export to Europe, unleſs in years of ſcarcity, when prices are neceſſarily much higher than uſual. The medium price of Wheat in Virginia and Maryland, appears to be higher than it commonly is in Britain, even under the trifling value of land, which only will advance as population increaſes, and improvements are made.

We ſhall now finiſh our account of this highly intereſting and important work, by expreſſing the deep ſenſe we entertain of the noble author's laborious exertions, in collecting ſuch a maſs of information concerning the civil, political, commercial, and agricultural ſtate of a country which promiſes, at no diſtant period, to rival old European governments in the arts and ſciences, and in every article of polity advantageous to mankind. The information, copiouſly and judiciouſly given, will be of material uſe to thoſe who may afterwards viſit America, and inſtructive to every one intereſted in the welfare of ſociety in theſe flouriſhing and well-regulated States. N.

Remarks on the Cauſe and Progreſs of the Scarcity and Dearneſs of Cattle, Swine, Cheeſe, &c. &c., and of the articles of Tallow, Candles, and Soap; pointing out divers modes for remedy, and to prevent ſuch calamity in future. Being the reſult of great experience, acquired by dealing at Fairs, Markets, &c. during the laſt thirty-ſeven years. Humbly dedicated to the Prime Miniſter of England, in behalf of the Community at large, more or leſs intereſted therein. Together with Hints for the conſideration of perſons having landed groperty, and dealers in cattle. 234 *pages*, 8*vo*. *By* J. MATTHEWS. *London, printed for the Author; ſold by* Scarlet, *&c. Price* 6s.

THIS elaborate title-page excited our curioſity; and we entered upon the work, under the ſanguine expectation of receiving

receiving ſatisfactory information concerning the important matters therein mentioned; but we confeſs that we have been utterly diſappointed. This deſultory and eccentric writer only tells us, that prices of beef, mutton, &c. are greatly increaſed ſince 1760, when he commenced buſineſs; a thing we are already practically acquainted with. The cauſe of this, he attributes to the great number of calves and lambs which are now killed; and ſuggeſts no other remedy than to prohibit ſuch practices, which he thinks would render the market for cattle and ſheep as plentiful and cheap as formerly.

Hark ye, Mr Matthews! do you ſuppoſe, when luxury is ſo vaſtly increaſed, that the like quantity of proviſions will ſatisfy the national conſumption, as was ſufficient in the year 1760, when you opened ſhop at Bath? Or do you think that a pound weight of beef and mutton can be ſold at the price then current, ſeeing that rent, labour, and public burdens, are now doubled? Let us try the queſtion by the price prefixed to your book. In 1760, a bookſeller would have been well paid with three ſhillings for 234 pages octavo; and yet you modeſtly demand double that ſum for a work of equal ſize. If a page of print has riſen in price, why ſhould not a pound of beef riſe alſo?

The work is dedicated to Mr Pitt, who is repreſented "to have had greater embaraſſments to encounter, owing to great fallings off of income to the revenue, and perhaps greater outgoings, occaſioned by ſcarcity and dearneſs of cattle, than any of his predeceſſors." And, in the body of the work, p. 161. thoſe in power are fervently exhorted, *if they poſſeſs Chriſtian charity, to attend to the next calving ſeaſon!!!*

General View of the Agriculture of the County of Northumberland, with Observations on the Means of its Improvement. Drawn up for the consideration of the Board of Agriculture, by J. Bailey *and* G. Culley. 209 pages 8vo. *Sold by Messrs* Robinson *and* G. Nicol, *London;* Bell, *Newcastle; and* Symington, *Edinburgh.*

This work is chiefly of a practical nature; and proceeding from two ſuch eminent agriculturiſts as Meſſrs Bailey

and Culley, who are juſtly ranked at the head of the profeſſion, deſerves minute conſideration.

Northumberland is a diſtrict of great extent, containing 1,267,200 acres; whereof nearly one-third is ſtated as improper for tillage. Of the cultivatable land, 800,000 acres are ſuppoſed worth 14s. *per* acre, and 450,000 acres at 2s., which gives an annual value of 605,000l. Sterling. The climate, in regard to temperature, is ſubject to much variation; and the prevailing ſoil is moiſt loam, accompanied with a portion of the ſeveral varieties which are to be found in this iſland.

Minerals conſtitute an important feature in the deſcription of this county; and perhaps working the ſubſoil in ſuch an extenſive manner, has contributed more to the improvement of the ſurface, than any other circumſtance. An increaſed population is the neceſſary conſequence of theſe ſubterraneous improvements, which augments the demand for every article of rural produce. This ſtimulates the activity of thoſe employed in field labour, raiſes the rate of rents, and, in ſhort, occaſions an influx of wealth among the inhabitants of all deſcriptions, greater than could have ariſen from the moſt flouriſhing manufacture.

The export of coals from Newcaſtle, appears to have increaſed nearly one half ſince 1772; the quantity ſhipped in 1795 being 505,650 chaldrons, or above 950,000 chaldrons, according to the London meaſure. The value of a chaldron, in the firſt inſtance, is 15s.; the charges of putting aboard are 2s. 3d. The duties, inſurance, &c. amount to about 22s. 3d.; and the freight and profit to the ſhipper, may be eſtimated at 23s. Theſe ſeveral ſums, except about 12s. per chaldron of duties, &c. are circulated in the neighbourhood, and prove the immenſe benefit of the coal-trade to the county of Northumberland.

The following extracts throw much light upon a queſtion often agitated, viz. *Whether the Britiſh collieries are inexhauſtible?*

"It has been aſſerted, 'That *the coals in this county are inexhauſtible.*'—Mr Williams, in his Natural Hiſtory of the Mineral Kingdom, is of a different opinion, and thinks it a matter of ſuch importance, as to deſerve the ſerious attention of the Legiſlature. Towards elucidating this point, it may be of ſome uſe to eſtimate what number of acres are wrought yearly in this county, to ſupply the above quantity of coals. In order to accompliſh this object,

ject, the thickneſs and number of workable ſeams of coal muſt be firſt aſcertained; for which purpoſe, we have been favoured with ſections exhibiting the thickneſs and depth of the various ſtrata, in ſome of the deepeſt pits in the county; which will not only be uſeful for the preſent purpoſe, but we hope will be acceptable to many of our readers who are curious in reſearches of ſubterranean geography.

At St Anthon's colliery, (three miles eaſt of Newcaſtle) the different ſeams are as follow:

Seam.	*Thickneſs of each ſeam.* Ft.	In.		*Depth to each ſeam.* Yds.	Ft.	In.
1. Coal	0	6	—	34	0	6
2. Ditto	0	8	—	41	1	2
3. Ditto	0	6	—	66	1	8
4. Ditto	1	0	—	82	2	2
5. Ditto	0	6	—	94	0	8
6. Ditto	0	8	—	101	2	4
7. Ditto	0	8	—	108	1	0
8. Ditto	1	0	—	128	0	0
9. High Main Coal	6	0	—	152	0	0
10. Coal	3	0	—	193	0	5
11. Ditto	0	6	—	200	2	2
12. Ditto	1	6	—	219	2	5
13. Ditto	3	3	—	247	0	2
14. Ditto	3	2	—	256	2	8
15. Ditto	0	9	—	258	1	5
16. Low Main Coal	6	6	—	270	1	8

In the above pit or ſhaft, which is nearly the deepeſt in the kingdom, there are no leſs than ſixteen ſeams of coal. But many of theſe, from their thinneſs, are not workable. The 9th, called the *high main coal*, and the 16th, the *low main coal*, are the two principal ſeams for affording quantities of coal, being altogether 12½ feet thick, and are thoſe moſt generally wrought. But the 10th, 13th, and 14th, are all workable ſeams, and will afford conſiderable quantities of coal; the aggregate of the three making nearly 9½ feet thick; ſo that the total thickneſs of the workable ſeams in this colliery amount to 22 feet.

In Montague Main colliery, (three miles weſt of Newcaſtle), the different ſeams of coal are as follow:—

Seams.	*Thickneſs of each ſeam.* Ft. In.		*Depth to each ſeam.* Yds. Ft. In.
1. Coal.	0 4	—	5 2 0
2. Ditto	0 6	—	44 1 0
3. Ditto	0 9	—	63 2 9
4. Benwell Main	5 3	—	69 1 10
5. Coal	1 0	—	79 2 10
6. Ditto	0 8	—	133 1 6
7. Ditto	3 4	—	137 1 10
8. Ditto	1 6	—	143 1 3
9. Ditto	1 3	—	147 2 2
10. Ditto	0 8	—	162 2 6
11. Low Main Coal	2 11	—	176 0 4
12. Lower Main Coal	2 10	—	199 2 10
13. Coal	0 6	—	226 0 10
14. Ditto	0 5	—	233 1 5
15. Ditto	0 3	—	241 1 10

In this ſhaft, there are fifteen ſeams of coal, of which only four are workable; viz. 4th, 7th, 11th, and 12th, making together 4 yds. 1 ft. 7 in. of workable coal. If the medium be taken betwixt this and St Anthon's, it will be nearly 6 yards thick of workable coal, from which may be formed,

A Calculation of the quantity of coal in an acre of ground, ſuppoſing the aggregate thickneſs of the various ſeams amount to ſix yards.

An acre of ground contains - 4840 ſquare yards;
which, multiplied by the thickneſs, 6 yards,

gives - - - 29,049 cubic yards in an acre.

From which deduct one third for waſte, and the part or pillars neceſſary to be left in working, - - 9680

there remains - - 19,360 cubic yards to be wrought.

And, as three cubic yards of coal, when wrought, affords a Newcaſtle chaldron,

therefore 19,360 / divided by 3 } gives 6,453 Newcaſtle chaldrons per acre.

The

The coals exported yearly from the rivers Tyne and Wear, with Hartly and Blythe, amount to about 825,000 chaldrons, which, with the home conſumption of the two counties of Northumberland and Durham, will make the quantity of coals raiſed yearly about 1,000,000 chaldrons.

And the chaldrons raiſed yearly 1,000,000
divided by the chaldrons per acre 6453
} gives 155 acres nearly per year, cleared of coal 6 yards thick.

And, by eſtimating the breadth occupied by the caking coals to be on an average 8 miles broad, and 25 miles long, in the two counties, we ſhall find there will be about 200 ſquare miles, or 128,000 acres, of coals proper for exportation.

Then the whole area 128,000
Divided by the yearly conſumption, 155
} gives 825 years, the time before this ſpace will be wrought out.

But there are ſome reaſons to think that a thickneſs of ſeam, equal to 6 yards, will not be obtained over an extent of 200 ſquare miles; probably not more, on an average, than 4 yards; in which caſe, the coal will be exhauſted in 550 years: And if the aggregate thickneſs of the ſeams to be obtained ſhould prove only 3 yards, then little more than 400 years will be the term of continuance; but it is probable, that, before the half of that time be elapſed, the price to the conſumer will be conſiderably increaſed, from the increaſed expence of obtaining them, and the increaſed length of carriage from the pits to the river. This laſt, we preſume, may be reduced, in ſome ſituations, by adopting canals in ſtead of waggon ways, which, we have often wondered, have never yet been attempted.

From the above inveſtigation, it appears that Mr Williams's apprehenſions are not ſo chimerical as have been repreſented: How far it might be right for the Legiſlature to interfere, we leave to the conſideration of thoſe more converſant in political ſpeculations.'

The *State of Property* is elucidated in the ſecond chapter; and, though leſs is ſaid on the ſubject than we could have wiſhed, yet the juſt ſentiments expreſſed deſerve the utmoſt praiſe. The candour and diſcernment of the ſurveyors are ſtrongly exemplified in the following paſſages:

'There are probably few parts of the kingdom where eſtates have made ſuch rapid improvements as in this country; there being ſeveral instances of the value being more than trebled within the laſt forty years. Many cauſes have certainly been aiding to produce

produce this effect; but the principal one is attributed to letting large farms on leaſes for twenty-one years; by which means the tenants of capitals were encouraged to make thoſe great exertions, from which ſuch advantages have reſulted, not only to themſelves and proprietors of the land, but to the community at large, from the very increaſed produce, and ſuperiority of its quality.

'The uſual mode of letting farms is, to fix a rent under certain conditions and covenants, ſix or twelve months before the expiration of the leaſe; but, upon one of the largeſt eſtates in the county *, the tenants have an offer of their farms two and a half or three *years* before the expiration of the leaſe, which is a mutual benefit to both landlord and tenant; and is attended with ſo many advantages, that it is in a fair way of being generally adopted.

'On ſome eſtates, the practice of letting farms by *ſecret propoſals*, is ſtill in uſe. This is a dark and myſterious mode, which frequently defeats the end it is intended to accompliſh; and inſtead of obtaining an *exceſſive high rent*, the prize has often been gained at a *very inferior value*; and, in the language of the turf, (where only one has entered the liſts), 'by walking the courſe:' And we have known ſome of the firſt farmers in the county forego their farms, rather than ſubmit to contend in the dark.'

It has been a queſtion with ſpeculative agriculturiſts, whether large or ſmall farms were moſt conducive to improvement, though, in our opinion, if facts were only adduced, the queſtion would hardly bear a diſpute. We are extremely glad to obſerve, in this work, indiſputable inſtances of the utility of large farms; and we believe, that if the condition of other diſtricts was impartially inveſtigated, the reſult would be exactly ſimilar to what is here ably ſtated:

'The ſize of farms varies conſiderably in this county; in Glendale and Bamborough wards, the farms are large, from 500l. to 1500l. a year; very few under 100l. In the other parts of the county they are from 50l. to 300l. a year. Some tenants in the northern parts of the county, farm from 2000l. to 4000l. a year, and upwards. The capitals neceſſary for ſuch farms entitle them to a good education, and give them a ſpirit of independence and enterprize, that is rarely found amongſt the occupiers of ſmall farms and ſhort leaſes. Their minds being open to conviction, they are ready to try new experiments, and adopt every beneficial improvement that can be learnt in other diſtricts; for this purpoſe, many of them have traverſed the moſt diſtant parts of the kingdom,

* The Earl of Tankerville.

dom, to obtain agricultural knowledge, and have tranſplanted every practice they thought ſuperior to thoſe they were acquainted with, or that could be advantageouſly purſued in their own ſituation: And ſcarcely a year paſſes, without ſome of them making extenſive agricultural tours, for the ſole purpoſe of examining the modes of culture, of purchaſing or hiring the moſt improved breeds of ſtock, and ſeeing the operations of new invented and moſt uſeful implements.'

'The character of a farmer is here ſo reſpectable, that gentlemen, who poſſeſs landed property from 500l. to 1500l. a year, think it no debaſement to follow the profeſſion; and ſo high a name have many of the farmers obtained, for their ſuperior knowledge in rural affairs, that they are ſeldom without pupils from various and diſtant parts of the kingdom, with whom they have very handſome premiums *. Amongſt the preſent pupils may be reckoned the ſon of an earl, and the ſon of a baronet;—who, from their abilities, attention, and anxious readineſs to learn and work at every operation, we hope will do credit to the profeſſion, and render the moſt eſſential ſervices to their reſpective diſtricts.'

We have ſeveral objections againſt the *heads of a lease*, preſented p. 32. as being beſt calculated for promoting improvement and the benefit of landlord than tenant. Theſe we ſhall ſhortly enumerate. It is with diffidence we differ in opinion with ſuch experienced agriculturiſts.

1ſt, We do not think it equitable to ſubject the tenant to the payment of all taxes, ſeeing that the burden is neceſſarily variable, and cannot be aſcertained at the commencement of the leaſe. *2dly*, The prohibition againſt ſelling hay, is rather a hardſhip, in particular caſes, upon the tenant, and detrimental to the public; for, under ſuch a covenant, how are innkeepers, and others unprovided with land, to be ſupplied with this neceſſary article? *3dly*, We are clearly of opinion, that reſtraining the tenant from ſowing flax, would be highly prejudicial to the manufacturing intereſt of the kingdom; for, if the covenant was univerſal, foreign flax would, in every caſe, be required, which would occaſion a large ſum of money to be annually loſt to the country. By ſowing at leaſt a ſmall quantity for farm ſervants and cottagers, the public intereſt is much promoted, as thoſe people work up the produce at their leiſure hours, which is a conſiderable national ſaving. *4thly*, The clauſe obliging the out-going tenant to thraſh his laſt crop

* Generally 100l. per annum.

crop *in an uniform manner*, is ſo far right; but, when it is added, "*and to deliver a daily ſupply of ſtraw to the next tenant*," it goes beyond what is practicable, when thraſhing-machines are generally introduced; and might ſubject the way-going tenant to much inconvenience, eſpecially if his ſucceſſor was of a troubleſome diſpoſition. We know ſeveral inſtances of way-going tenants being diſpoſed to thraſh out their crop in an irregular manner; but, upon application to the Judge Ordinary (the Sheriff of the county), every ſuch attempt has immediately been interdicted. The firſt part of the clauſe, therefore, in our humble opinion, is quite ſufficient; the addition would only lay a foundation for diſputes, which too often happen betwixt the parties. *5thly*, The covenant reſpecting the application of lime, appears looſely worded, and would give room for diſpute. If the tenant is to be ſole judge, *where or when it was neceſſary* to apply lime, the clauſe is unneceſſary. If he is not the judge, but muſt either beſtow the quantity ſpecified in his leaſe, or adopt the alternative of uſing ſo much dung in its place, then a burden is impoſed upon him, which may prove of no advantage to the land; a previous clauſe having already declared, that the dung could not be carried off the premiſes. It rather gives us ſurpriſe to notice ſuch judicious cultivators indirectly recommending the uſe of calcareous manures each time the land is Summer-fallowed, or under fallowed-crops.

We have, in former reviews, expreſſed our diſapprobation of the ſection of *expence* and *profit*, which we judged improper ſubjects for public diſcuſſion; and the more we conſider the matter, the more our original ideas are confirmed. It is obvious, that ſcarcely any two farms are cultivated at the ſame rate of expence; and that the profits are regulated by a number of circumſtances which can hardly be celebrated.

The expence of a farm under the rotation of three years arable, and three years graſs, is ſtated to be 12l. 3s. 6d. for ſix years, independent of rent, and the ſupport of the farmer's family; the produce, for the ſame time, is taken at 20l.; which leaves a balance of 7l. 16s. 6d., or 1l. 6s. 1d. per acre *per annum*. We apprehend that this ſtatement is materially erroneous; and that, under the preſent rate of rents, public burthens, value of labour, and increaſed expence of living, no farmer could carry on his buſineſs upon ſuch terms. It does not preſent the higheſt character of Northumberland huſband-

ry,

dry, that the value of the produce ſhould not much exceed what is paid for rent in ſome other diſtricts.

We confeſs we are not fond of analyzing the different calculations upon which the above balance is founded; becauſe the gentlemen who offer them are undoubtedly better qualified to judge of their correctneſs, than we who reſide at a diſtance, and are unacquainted with the rate of Northumberland markets. Still we muſt remark, that neither oats nor barley, under exiſting circumſtances, can be raiſed by a farmer at the prices mentioned. Twenty years ago, ſuch a ſcale might have been juſt; but, at this time, the farmer is not able to diſpoſe of his produce, *during the currency of a lease*, at theſe low prices; though it may happen, that, during a particular year, when markets are low, he may only receive the value which is ſtated.

The decreaſed value of graſs land, from ſuffering it to remain three years unploughed, is obvious, from what is ſtated in p. 36, and is nearly agreeable to what we have uniformly found to be the caſe in our practice. Thirty-three per cent. loſs the ſecond year, and double that ſum the third year, are good arguments for breaking it up at an earlier period; though the ſurveyors, in another part of the work, aſſign ſtrong reaſons for the exiſting practice. We believe, however, that the increaſed value of the turnip crop will not compenſate for 3l. Sterling, loſt by the poſſeſſor, during the time he kept the land in graſs, exceeding the Norfolk term of one year.

At the ſame time we admit, that a conſiderable proportion of Northumberland (perhaps three-fourths) is not naturally calculated for a regular courſe of crops, though the remainder, we believe, is managed in as complete a ſtyle as any other part of the iſland. The tenants are therefore in the right, when they adopt ſuch a ſyſtem, as is moſt conſonant to the ſeveral varieties of ſoil which they occupy; and if it is found that turnips and corn cannot be raiſed in a profitable way without permitting the land to be previouſly refreſhed by graſs, for more years than one, it is certainly advantageous that the plough ſhould be uſed ſparingly in all ſuch ſituations. It is upon this principle that we have conſtantly contended againſt reſtrictive covenants, becauſe they neceſſarily preclude diſcretionary management, and occaſion the ſame line of huſbandry to be followed out, whether the ſoil and other circumſtances permit ſuch an uniformity.

The

The fifth chapter, upon *implements of husbandry*, will be an acceptable treat to every perſon who has made theſe matters his ſtudy. The opinion given upon wheel-carriages, is preciſely what has occurred to us on the ſubject; and the uſe of waggons is, with great juſtice, ſeverely cenſured, as being deſtructive to roads, and of little utility to farmers. The account of the ſwing-plough deſerves attention, being, in our opinion, the beſt demonſtration of the principles upon which ſuch an uſeful and neceſſary implement ſhould be conſtructed. It is, undoubtedly, a matter of ſurpriſe, that no fixed rules have been hitherto adhered to in the conſtruction of the plough, which is evident from the difference of work of the ſeveral ploughs made by the ſame carpenter.

We obſerve, with ſatisfaction, that the ingenious authors have amended their account of the thraſhing-machine, and that they have now done that juſtice to Mr Meikle, the patentee, which his merit deſerves. A very full and accurate deſcription of the machine is given; from which, and from an engraving annexed, any perſon acquainted with the principles of machinery, might, with facility, conſtruct and erect ſuch an implement. Indeed, it is the beſt deſcription of the thraſhing-machine that has come under our conſideration. N.

(To be continued.)

PART III.

EXTRACTS FROM AGRICULTURAL PUBLICATIONS.

Extracts from the Agricultural Survey of the County of WILTS, *reſpecting the Benefit of Water Meadows.*

THERE is, perhaps, no part of this kingdom, where the ſyſtem of watering meadows is ſo well underſtood, and carried to ſo great perfection, as in this diſtrict. This, which is ſo juſtly called by Mr Kent, "the greateſt and moſt valuable of all improvements," was *generally* introduced into this diſtrict at the latter end of the laſt, and the beginning of this century. Many of the moſt valuable and beſt formed meadows, particularly in the *Wyley Bourn*, were made under the direction of one farmer Baverſtock of Stockton, between the year 1700, and the year 1705. And, at preſent, there is ſcarcely a river or brook in the diſtrict that is not applied in ſome way or other to this purpoſe.

An

An imperfect ſcheme of watering had undoubtedly been practiſed before that period. Perh ps, indeed, its introduction into this diſtrict is almoſt coeval with that of folding ſheep, with which it is intimately connected. But the *regular mode*, in which both ſyſtems are now conducted, is certainly not very ancient. Many old farmers, who have died within the memory of man, remembered when neither of the ſyſtems was conducted on any regular plan.

Theory of water meadows.—The idea of watering meadows, ſo far as it relates to bringing the water *upon the land*, was taken from *nature*. It muſt have been always obſerved, that Winter floods produced fertility, provided the water did *not* remain *too* long on the land. The idea of taking the water *off* the land *at will*, and bringing it *on again at will*, is the effect of *art;* and the knowledge of the proper time to do this, the effect of obſervation

A water meadow is a *hot-bed* for graſs. In what manner water acts upon land, ſo as to produce a premature vegetation, before natural vegetation begins, is a philoſophical problem which it is not a farmer's province to ſolve. It was ſufficient for him to know that the fact was ſo. Obſervation on the effects of water ſo brought on, ſoon ſhewed them at what period its good effects ceaſed, and when it began to do miſchief. This obſervation, therefore, regulated the time of keeping the water on the land; and as this period was different, on different kinds of land, and at different ſeaſons of the year, it became neceſſary that they ſhould have ſuch a command of the water, as to *take it off* immediately, as ſoon as they found the ſtate of the land required it. This, by degrees, produced that regular diſpoſition of the water-carriages and water drains, which, in a well laid out meadow, bring on and carry off the water, as ſyſtematically as the arteries and veins do the blood in the human body.

As water meadows are totally unknown in many parts of the kingdom, and but very partially known in others, it may not be thought improper, in an agricultural account of South Wiltſhire, to ſpeak a little more fully on their nature and properties. If it ſhould tend to excite the ſame improvement in other counties, one of the great objects of the inſtitution of the Board of Agriculture will be anſwered.

Nature and properties of water meadows.—It has been already premiſed, that the principle of a water meadow is, the power of bringing on and carrying off the water at pleaſure. And, provided this great object can be accompliſhed, it is not

not material what the ſhape of a water meadow is, or that the diſpoſition of the trenches (provincially "*the works of the meadow*,") ſhould be uniform. But, as very little land can be entirely commanded by water, unleſs its inequalities are reduced by manual labour, it has been found convenient to adopt two different kinds of water meadows; one for land lying on declivities, and which muſt in general be watered from ſprings or ſmall brooks; and the other for low land near rivers, to be watered from thoſe rivers.

The firſt kind is called, in Wiltſhire, "*catch-work meadows*," and the latter, "*flowing meadows*." The latter are by far the moſt general in this diſtrict.

It is impoſſible to give any intelligible written deſcription the mode of making theſe meadows. This operation muſt be ſeen, to be properly underſtood.

Catch-work meadows deſcribed.—But, to elucidate the diſtinction between the two kinds of meadow, and to give ſome idea what are the ſituations in which they may be introduced, it may be neceſſary to remark, that the "catch-work meadow" is made by turning a ſpring, or ſmall ſtream, along the ſide of a hill, and thereby watering the land between the New Cut, (or, as it is provincially called, the Main Carriage), and the original water-courſe, which now becomes the "main drain." This is ſometimes done, in particular inſtances, merely by making the new cut level, and ſtopping it at the end; ſo that, when it is full, the water may run out at the ſide, and flood the land below it. But, as the water would ſoon ceaſe to run *equally*, for any great length, and would waſh the land out in gutters, it has been found neceſſary to cut ſmall parallel trenches or carriages, at diſtances of twenty or thirty feet, to catch the water again; and each of theſe being likewiſe ſtopped at its end, lets the water over its ſide, and diſtributes it till it is caught by the next, and ſo on over all the intermediate beds, to the *main drain* at the bottom of the meadow, which receives the water, and carries it on to water another meadow below; or, if it can be ſo contrived, another part of the ſame meadow, on a lower level.

To draw the water out of theſe parallel trenches or carriages, and lay the intermediate beds dry, a narrow deep drain croſſes them at right angles, at about every nine or ten poles length, and leads from the main carriage at top to the main drain at the bottom of the meadow.

When this meadow is to be watered, the ends of the carriages adjoining the croſs drains are ſtopped with turf, dug on the

the ſpot, and the water if thrown over as much of the meadow as it will *cover well* at a time, which the watermen call a "*pitch of work*;" and, when it is neceſſary to lay this pitch dry, they take out the turves, and let the water into the drains, and proceed to water another pitch.

This kind of water meadow is ſeldom expenſive: The ſtream of water being uſually ſmall and manageable, few *hatches* are neceſſary: and the land lying on a declivity, much leſs manual labour is required to throw the water over it regularly, and particularly *to get it off again*, than in the flowing meadows. The expence of making ſuch a meadow, is uſually from 3l. to 5l. per acre; the improvement frequently from 15s. an acre to at leaſt 40s. The annual expence of keeping up the works, and watering the meadow, which is uſually done by the acre, ſeldom ſo high as 7s. 6d. per acre.

Flowing meadows described.—The other kind of water meadows, viz. thoſe uſually called "*flowing meadows*," require much more labour and ſyſtem in their formation. The land applicable to this purpoſe being frequently a flat moraſs, the firſt object to be conſidered is, how the water is to be *got off* when once brought on; and, in ſuch ſituations, this can ſeldom be done, without throwing up the land in high ridges, with deep drains between them. A main carriage being then taken out of the river at a higher level, ſo as to command the tops of theſe ridges, the water is carried by ſmall trenches or carriages along the top of each ridge, and, by means of moveable ſteps of earth, is thrown over on *each* ſide, and received in drains below, from whence it is collected into a main drain, and carried on to water other meadows, or other parts of the ſame meadow below. One tier of theſe ridges being uſually watered at once, is uſually called "a pitch of work;" and it is uſual to make the ridges thirty or forty feet wide, or, if water is abundant, perhaps ſixty feet, and nine or ten poles in length, or longer, according to the ſtrength and plenty of the water.

It is obvious from this deſcription, that as the water in this kind of meadow is not uſed again and again, in *one pitch*, as in the catch-meadows, that this method is only applicable to large ſtreams, or to vallies ſubject to floods; and as theſe ridges muſt be formed by *manual labour*, the expence of this kind of meadow muſt neceſſarily exceed the more ſimple method firſt deſcribed; and the hatches that are neceſſary to

manage and temper the water on rivers, muſt be much more expenſive than thoſe on ſmall brooks.

The expence, therefore, of the firſt making of ſuch a meadow as this is, will be from 12l. to 20l. per acre, according to the difficulty of the ground, and the quantity of hatch-work required: but the improvement in the value of the land, by this operation, is aſtoniſhing. The *abſtract value* of a good meadow of this kind, may fairly be called 3l. per acre; but its value, when taken as *part of a farm*, and particularly of a *ſheep-breeding farm*, is almoſt beyond computation; and when ſuch a meadow is once made, it may be ſaid to be made for ever; the whole expence of keeping up the works, and watering it frequently, not exceeding 5s. per acre yearly, and the expence of the hatches, if well done at firſt, being a mere trifle for a number of years afterwards.

Supposed quantity of water meadows in this district.—The number of acres of land in this diſtrict, under this kind of management, has been computed, and with a tolerable degree of accuracy, to be between 15 and 20,000 acres.

Indeed, it has been found ſo very beneficial, that very few ſpots of land, capable of being watered, remain otherwiſe, unleſs where ſome *watermill* ſtands in the way, or where ſome perſon, who has the command of the water *above*, refuſes to let it be taken out of its natural courſe to water the lands below.

Some new meadows might be made, and very great and beneficial alterations made in the old ones, if ſome plan could be adopted to get the command of water where neceſſary for this purpoſe, and particularly in the caſe of water-mills. A remedy for this will be afterwards propoſed.

Water meadows do not make a country unhealthy—It has been alleged, by thoſe who know very little of water meadows, that they render the country unwholeſome, by making the water ſtagnant—Daily obſervation proves the fact to be otherwiſe in Wiltſhire; and the reaſon is obvious. It has been already ſaid, that a water-meadow is a "hot-bed for graſs:" The action of the water on the land excites a *fermentation*; that fermentation would certainly, in time, end in *putrefaction*; but the moment putrefaction begins, vegetation ends. Every farmer knows the commencement of this putrefaction, by the ſcum the water leaves on the land; and if the water is not then inſtantly taken off, the graſs will rot, and his meadow be ſpoiled for the ſeaſon. The very principle of water-meadows, will not permit water to be ſtagnant

nant in a water-mead country; it muſt be always kept in action, to be of any ſervice: beſides, many of the beſt water meadows were, in their original ſtate, a ſtagnant unwholeſome moraſs.

The draining ſuch land, and making it ſo firm that the water may be taken off at will, muſt contribute to the healthineſs of the country, inſtead of injuring it.

Great advantages from water meadows.—It is frequently aſked, how it comes to paſs, that although water meadows are ſo uſeful, as to be almoſt indiſpenſable in South Wiltſhire, yet, in other counties, where they are not known, the want of them is not felt; nay, that there are, even in this diſtrict, many pariſhes who have none, and even breed lambs without them? To this I anſwer, that the fair queſtion is not, "How do other counties do without them?" but, "How could the farmers of this diſtrict, who are happy enough to have water meadows, purſue their preſent ſyſtem of ſheep breeding, if thoſe meadows were taken away?" A ſyſtem which, I do not heſitate to ſay, is more profitable to themſelves, their landlords, and the community at large, than any other that could be ſubſtituted in its room; and perhaps this queſtion cannot be anſwered better, than by exhibiting the contraſt between thoſe who have water meadows, and thoſe who have none, in the ſame diſtrict.

Every farmer, who keeps a flock of ſheep, and particularly a breeding flock, in ſo cold and late ſpringing a diſtrict as South Wilts, knows and feels the conſequences of the month of April,—"That month, *between hay and grass*, in which he who has not water meadows for his ewes and lambs, frequently has *nothing!*" The ewes will bring a very good lamb with hay only; perhaps a few turnips are preſerved for the lambs, which, in a favourable ſeaſon, may laſt them through March; but if they are then obliged to go to hay again, the ewes ſhrink their milk, the lambs "pitch and get ſtunted," and the beſt Summer food will not recover them. To prevent this, recourſe is had to feeding the graſs of thoſe dry meadows that are intended for hay, the young clovers, and frequently the young wheat; in fact, every thing that is green.—And who will pretend to eſtimate what is the loſs that a farmer ſuffers by this expedient?

The rye graſs, on the expoſed parts of this diſtrict, is ſeldom "a bite" for the ſheep, till May-day. If the ſeaſon ſhould permit any turnips to be kept till that time, (which can ſeldom be depended upon), they are not only of little

nouriſhment to the ſtock, but they exhauſt the land ſo as to prejudice the ſucceeding crop. And it ought to be remarked by the way, that in many parts of this diſtrict, the ſoil is not at all favourable to the production of turnips. It therefore neceſſarily follows, that a farmer, under theſe circumſtances, has no *certain reſource* to ſupport his ſtock during this month, but hay—and even in that he is ſometimes diſappointed, by having been obliged, in the preceding Spring, to feed all the land which he had laid up for a hay crop: he is then obliged to buy hay, and that frequently at the diſtance of many miles. And, to add to his diſtreſs at this critical time, his young ewes are then brought home from wintering, to be kept nearly a month on hay alone.

In this month, which ſo often ruins the crops, and exhauſts the pockets of thoſe ſheep breeding farmers who have no water-meadows, the water-mead farmers may be truly ſaid to be "in clover." They hain up their dry meadows early, ſo as almoſt to inſure a crop of hay; they get their turnips fed off *in time* to ſow barley, and have the vaſt advantage of a *rich fold* to manure it. They ſave a *month's hay*, and have no occaſion to touch their field-graſs till there is a good bite for their ſheep; and their lambs are as forward at *May-day*, as thoſe of their leſs lucky neighbours are at *Midſummer*. And, after all, they are almoſt certain of a crop of hay on their water meadows, let the ſeaſon be what it will.

Management of water meadows.—The management of water meadows (as nearly as it can be deſcribed in an account neceſſarily ſo conciſe as this), is in the following way.

As ſoon as the after graſs is eaten off as bare as can be, the manager of the mead (provincially "the drowner") begins cleaning out the main drain, then the main carriage, and then proceeds to "right up the works," that is, to make good all the water carriages that the cattle have trodden down, and open all the drains they may have trodden in, ſo as to have one tier or pitch of work ready for "drowning," and which is then put under water (if water is plenty enough) during the time the drowners are righting up the next pitch. In the flowing meadows this work is, or ought to be, done early enough in the Autumn, to have the whole mead ready to catch, if poſſible, "*the firſt floods after Michaelmas*," the water being then "thick and good," being the *firſt* waſhing of the arable land on the ſides of the chalk hills, as well as of the dirt from the roads, &c. &c.

The

The length of this Autumn watering cannot always be determined, as it depends on ſituations and circumſtances; but if water can be commanded in plenty, the rule is, to give it a "thorough good ſoaking" at firſt, perhaps a fortnight or three weeks, with a dry interval of a day or two, and ſometimes two fortnights, with a dry interval of a week, and then the works are made as dry as poſſible, to encourage the growth of the graſs. This firſt ſoaking is to make the land ſink, and pitch cloſe together; a circumſtance of great conſequence, not only to the *quantity*, but to the *quality* of the graſs, and particularly to encourage the ſhooting of the new roots which the graſs is continually forming, to ſupport the forced growth above

While the graſs grows freely, a freſh watering is not wanted; but, as ſoon as it flags, the watering may be repeated for a few days at a time, whenever there is an opportunity of getting water; always keeping this fundamental rule in view, "*To make the meadows as dry as poſſible between every watering;*" and to "*ſtop the water the moment the appearance of any ſcum on the land ſhews that it has already had water enough.*"

Some meadows that will bear the water *three weeks* in October, November, or December, will perhaps not bear it *a week* in February or March, and ſometimes ſcarcely *two* days in April or May.

In the catch meadows watered by ſprings, the great object is to keep the "works of them" as dry as poſſible between the intervals of watering; and, as ſuch ſituations are ſeldom affected by floods, and generally have too little water, care is neceſſary to make the moſt of the water, by catching and rouſing it as often as poſſible; and as the *top-works* of every tier or pitch will be liable to get more of the water than thoſe lower down, care ſhould be taken to give to the latter a *longer time*, ſo as to make them as equal as poſſible.

Cuſtom of feeding meadows with ſheep.—It has already been ſaid, that the great object, in this diſtrict, of an early crop of water meadow graſs, is, to enable the farmer to breed early lambs.

As ſoon as the lambs are able to travel with the ewes, (perhaps about the middle of March), they begin to feed the water meadows. Care is, or ought to be taken, to make the meadows as dry as poſſible, for ſome days before the ſheep are let in.

The grafs is hurdled out *daily* in portions, according to what the number of fheep can eat in a day, to prevent their trampling the reft; at the fame time, leaving a few open fpaces in the hurdles for the lambs to get through, and feed forward in the freth grafs. One acre of *good grass* will be fufficient for five hundred couples for a day.

On account of the quicknefs of this grafs, it is not ufual to allow the ewes and lambs to go into it with empty bellies, nor before the dew is off in the morning.

The hours of feeding are ufually from ten to eleven o'clock in the morning, to about four or five in the evening, when the fheep are driven to fold; the fold being generally, at that time of the year, (as has been mentioned before), on the barley fallow. And the great object is to have water-mead grafs, fufficient for the ewes and lambs, till the barley fowing is ended.

Meadows laid up for hay.—As foon as this firft crop of grafs is eaten off by the ewes and lambs, the water is immediately thrown over the meadows, (at this time of the year, two or three days over "each pitch," is generally fufficient) and it is then made perfectly dry, and laid up for a hay crop. Six weeks are ufually fufficient for the growth of the crop. It feldom requires eight; and there have been inftances of grafs crops being produced in five.

Nature of water meadow hay.—The hay of water meadows, being frequently large and coarfe in its nature, it is neceffary to cut it young; and, if made well, it then becomes of a peculiarly nourifhing milky quality, either for ewes or dairy cows.

The water meadows are laid up for a fecond crop, in *some instances;* but this is only ufual when hay is fcarce: not that it is fuppofed to hurt the land, but the hay is of that herbaceous foft nature, and takes fo long time in drying, that it is feldom well made. It is ufually of much greater value to be fed with dairy cows. And, for that purpofe, a flufh of after-grafs, fo early and fo rank, will be precifely of the fame comparative fervice to the dairy, as the Spring feed has been defcribed to be for ewes and lambs.

The cows remain in the meadows till the "drowner" begins to prepare for the Winter watering.

Water meadows safe for sheep in Spring, but will rot them in Autumn.—Water meadows are reckoned to be perfectly fafe for fheep in the Spring, even upon land that would rot fheep if it was not watered; but, in the Autumn, the beft water meadows

meadows are ſuppoſed to be dangerous. This is at preſent an explicability in the operations of nature; and a diſcovery of the reaſon might perhaps lead, in ſome meaſure, to a diſcovery of the cauſes of the rot in ſheep. But the circumſtance itſelf is rather an advantage, than a diſadvantage, to this diſtrict; as it obliges the farmers to a keep a *few dairy cows*, to feed the water meadows in Autumn, and to provide artificial graſſes, or other green crops, for their ſheep during that period.

Proper ſoils for water meadows —From what has been ſo repeatedly urged, on the neceſſity of making water meadows dry, as well as wet, every reader might have inferred the advantage of having them, if poſſible, on "*a warm abſorbent bottom.*"

The bottom, or ſubſoil of a water-mead, is of much more conſequence than the quality or the depth of the top-ſoil.

Not but that land on peaty or clay bottoms may be conſiderably improved by watering; and there are many good water meadows on ſuch ſoils; but they are not ſo deſireable, on account of the difficulty of draining the water out of them, and making them firm enough to bear trading.

A looſe gravel, or, what perhaps is ſtill better, a bed of broken flints, with little or no intermixture of earth, whereever it can be obtained, is the moſt deſireable bottom.

On many of the beſt water meadows in this diſtrict, where the bottom is a warm abſorbent gravel, or rather a bed of broken flint, the ſoil is not ſix inches deep, and that depth is quite ſufficient in thoſe ſeaſons when water is plenty, as the graſs will root in the warm gravel, in preference to the beſt top-ſoil whatever; and ſuch meadows always produce the earlieſt graſs in the Spring. Nor is it ſo very material, of what *kinds of graſſes* the herbage is compoſed, when the meadow is made. *That kind* will always predominate, which *agrees beſt with the ſoil and the water*, provided the ſupply of water is regular and conſtant *every Winter*; otherwiſe, *that kind* will predominate which will bear *wet and dry*; and ſome of the worſt graſſes, in their native ſtate, will become the beſt, when made ſucculent by plenty *of water*.

Woburn Sheep-Shearing.

It is with singular pleasure that we present a particular Account of the truly rational Agricultural Fete, *lately given by his Grace the* Duke *of* Bedford, *at Woburn Abbey, which cannot fail to be attended with the happiest consequences to the Husbandry of Great Britain. Compared with this rural entertainment, how contemptible do the innumerable details of balls, routs, &c. given this Spring in the metropolis, appear! His Grace has adopted a line of conduct creditable to himself, and useful to the public; and holds out a pattern which we earnestly hope may be extensively imitated.*

On Monday, June 16, the ſheep-ſhearing and ſhew of cattle commenced; and this truly laudable inſtitution attracted ſeveral hundreds of agriculturiſts and breeders from all parts of this country, among whom were ſeveral gentlemen, members of the well-known Society of Breeders from Leiceſterſhire; a Baron from Germany, who is at the head of an agricultural eſtabliſhment in that country; and four gentleman from Ireland.

His Grace the Duke of Bedford gave a public breakfaſt at the Abbey, at nine o'clock.

At about eleven o'clock, His Royal Highneſs Prince William of Glouceſter arrived at the Abbey, from the ſeat of Sir George Oſburne at Cheakſands, where he had been on a viſit ſince the review, on Friday, at Hatfield. His Royal Highneſs was attended by Sir George; and, ſoon after their arrival, the company proceeded, in a grand cavalcade, to the New Farm-Yard, in the park, for the purpoſe of inſpecting the ſheep ſhearing, at which five of the beſt hands that could be procured were employed: They then proceeded to the building lately erected for examining the *ewes* that are to be let for the next ſeaſon, which were viewed by the hirers of *tups*; but their prices were not fixed, as laſt year: they were to be ſhewn again on Tueſday, with the prices fixed on them.

The certificates were then opened by his Grace, and a Committee of the different candidates for the prize of fifty guineas, to be given by his Grace (for encouraging the introduction of the Leiceſter and South Down breed of ſheep into Bedfordſhire)

to

to the perſon in Bedfordſhire who ſhould, between June 1799 and Chriſtmas, expend the largeſt ſum of money (not leſs than ſixty guineas) in the purchaſe of breeding ewes or theaves of the new Leiceſter or South Down breed, Theſe were taken into conſideration; but the ſucceſsful candidate was not announced.

About three o'clock the company adjourned to dinner; and his Grace entertained near 200 noblemen, gentlemen, and yeomen, in the large hall, in the ancient part of the Abbey, where tables were laid, which branched out in three directions; but ſo contrived, as to have but one head, at which his Grace preſided. Prince William of Glouceſter ſat as Croupier.

About ſix o'clock they left the Abbey, and proceeded to the farm-yard again, when a very fine hog, the property of Mr Pickford, waggon-maſter in Market ſtreet, was ſhewn, which was ſuppoſed to weigh about an hundred ſtone. During the whole of this time the men continued ſhearing ſheep, in a place conveniently adapted for the whole of the meeting to ſee them. His Grace then conducted the company to a paddock, near the Evergreens, to ſee ſome ſelect Devonſhire oxen; and from thence they proceeded to the water meadow, near Birchmore Houſe, in Crawley-lane, where there were ſome very fine Devonſhire cows.

The meeting did not break up till near dark, when the Prince returned to Sir George Oſburne's.

SECOND DAY.

On Tueſday, the Duke of Bedford, attended by his company, proceeded from the Abbey on horſeback to the New Farm-Yard in the Park, where they were met by great numbers who had arrived from different parts.

The tups that were ſhewn yeſterday were ſhewn ſingly again to-day, and they were deſcribed as follows:

Shearhogs, No. 1. to 8. by the Diſhley L. Mr Stone's ſheep.

No. 9. to 12. Two Shears, by a ſon of the Diſhley L.

No. 14. and 15. Three Shears, by Mr Breedon's L. a ſon of ditto.

The Sweepſtakes of five guineas each, made by the Duke of Bedford, Lord Winchelſea, Lord Sommerville, and Mr Bouverie, to produce at this ſheep-ſhearing the beſt two years old heifers of the Devonſhire breed: The Duke of Bedford's being dead, and Mr Bouverie not producing one, it reſted with Lord Winchelſea and Lord Sommerville: and a Committee was appointed, conſiſting of Mr Smith of Tirmarſh, in Northamptonſhire, Mr Stone of Loughborough in Leiceſterſhire, and a Mr Warren; when, after a conſiderable examination, they declared in favour of Lord Winchelſea.

Mr

Mr Garrard the modeller of cattle, from London, exhibited the models of the famous ſhew of cattle, which were exhibited at Smithfield laſt Chriſtmas, which were highly approved of: he likewiſe exhibited a number of other well-known cattle. Several improved implements in huſbandry were exhibited, particularly a chaff-cutter, ploughs, harrows, &c. At three o'clock, the Duke entertained about two hundred of the company in the great hall in the Abbey with an elegant dinner, conſiſting of 160 covers.

About ſix o'clock, the company aſſembled again at the New Farm Yard, when the tups, ſhewn in the morning, were put up to be let for the enſuing ſeaſon.

No. 1. a 20 guineas, was taken by Sir John Sebright.
No. 2. a 30 guineas, there were five Candidates for: they drew lots, and Mr Matſon, from Kent, drew the prize.
No. 3. a 30 guineas, there were ſix Candidates; and Mr Moore of Aſpley, in this county, drew the prize.
No. 4. a 15 guineas, was not let.
No. 5. a ſix ditto, ditto.
No. 6. a 50 guineas, there were thirteen Candidates; and Mr Matſon, from Kent, drew the prize.
No. 7. a 80 guineas, there were ſeven Candidates; and Mr Money, from Norfolk, drew the prize.
No. 8. a 25 guineas, Mr Bithery, of Stoke Mills, in this county, was the only Candidate.
No. 9. a 30 guineas, there were three Candidates; and Mr Pears, of Thorney Fen, near Peterborough, drew the prize.
No. 10. a 40 guineas, was not let.
No. 11. a 70 guineas, there were eight Candidates; and Mr Horton, of March, in the Iſle of Ely, drew the prize.
No. 12. a 100 guineas, was not let.
No. 13. a 100 guineas, was not let.
No. 14. a 20 guineas, let to Mr Mann, of Henloe, in this county.
No. 15. a 40 guineas, was not let.

This buſineſs took up the whole of the afternoon, till near dark, during which ſeveral bets were made about Cattle.

THIRD DAY.

Wedneſday, there was a greater number of people aſſembled than on the former days; and the weather proving fine, the ſight of ſuch a number of opulent men, aſſembled upon ſo laudable and rational a purpoſe, was highly gratifying.

About eleven o'clock, the company began to move in a grand cavalcade from the Abbey, and they were met in the park by a great number of others, who had come from different parts, horſemen,

horſemen, and others on foot, of the firſt reſpectability, when they proceeded to the New Farm-Yard.

Nine South Down two ſhears, and one three ſhear, were exhibited in the Exhibition Room, and were examined by the hirers of the tups.

Two remarkable fine and fat cows, which had been fatted by poor feed, under certain management, the property of Mr Maxay of Knotting, in this country, were exhibited.

A machine for dreſſing corn in an expeditious way, was exhibited in the yard, for which Mr Cooche of Malſton, in Northamptonſhire, has lately obtained a patent.

As ſoon as the inſpection of the rams, and exhibitions were over, the company, headed by the Duke, proceeded to a fallow field, near Birchmore-houſe, where experiments were tried by five different ploughs, namely, a Northumberland, a Surry, or Duckats, a Bedfordſhire, a Norfolk, and a Scotiſh one, on which experiments were made in ſowing turnips, by making the harrows wide apart. The manure was then regularly diſtributed in them; after which, a roller was drawn by an ox, and to the roller was attached a drilling machine, ſo contrived for the roller to cover the manure with the ridges of earth, and the ſeeds to fall on the earth which had fallen on the manure; and the machine was ſo contrived as to cover the ſeed with earth, ſo that the ſeed lay as on a hot-bed. After the inſpection of the ploughs, the company proceeded to Ridgemond-fields, where experiments were made with Mr Leiceſter's ſcuffling harrows; for the improvement of which he has lately obtained a patent. Experiments were alſo made on Mr Potts' improved harrows.

Theſe experiments were made in conſequence of his Grace (with that truly laudable zeal for which he is ſo eminently diſtinguiſhed in the encouragement and improvement of agricultural purſuits) having offered a premium of twenty guineas to the perſon who ſhould produce, at this ſheep-ſhearing, the beſt and moſt newly invented implement in agriculture. It is left to a Committee to decide, which implement produced ought to have the preference; whether any of them merit the reputation that the acquiſition of a premium would confer; and which will be made known by the Committee on Thurſday. About three o'clock, his Grace entertained about two hundred gentlemen with an elegant dinner at the Abbey, at which his Grace preſided.

A challenge was made by ſome Hereford gentlemen, to produce better cattle than any county in England, which was taken up by Sir Thomas Carr, High Sheriff for the county of Suſſex, who undertook to produce as fine from Suſſex.

After

After dinner, the company proceeded to inſpect three fat wedders, two of them belonging to Mr Platt of Lidington, and one to Mr Cowley of Aſpley, as candidates for a ſilver cup, value ten guineas, for one, and a premium for a ſecond, of a cup value five, which his Grace has offered. They are to be ſheared, weighed alive, killed, and weighed when dead; and, after all circumſtances are taken into conſideration by a Committee, they will determine which are the beſt.

The company then returned to the New Farm-Yard, when the ten South Down tups were let as follows: No. 1. for 10 guineas; No. 2. for 40 guineas; No. 3. for 30 guineas; No. 4. for 25 guineas; No. 5. for 30 guineas; No. 6. for 80 guineas; No. 7. for 50 guineas; No. 8. for 40 guineas; No. 9. for 120 guineas; No. 10. for 25 guineas.

An experiment was tried on the corn dreſſing machine, produced in the morning; when it completely dreſſed a buſhel of wheat in ſix minutes.

FOURTH DAY.

Thurſday morning, his Grace gave another public breakfaſt at nine o'clock; and about eleven his Grace and the company arrived at the New Farm Yard; when the following Leiceſterſhire breed of tups was exhibited in the exhibition-room.

SHEARHOGS.

No. 1. by a ſon of Diſhley L. was let for 10 guineas.
2. by ditto ditto ditto 10 ditto.
3. by ditto ditto ditto 10 ditto.
4. by ditto ditto ditto 10 ditto.
5. by ditto ditto ditto 15 ditto.
6. by ditto ditto ditto 15 ditto.

TWO SHEARS.

7. by a ſon of Diſhley L. was let for 12 guineas.
8. by ditto ditto ditto 12 ditto.
9. by ditto ditto ditto 15 ditto.
10. by ditto ditto ditto 20 ditto.

THREE SHEARS.

11. by Breedon's L. was let for 15 guineas.
12. by K. 4 ſhear ditto 15 ditto.
13. by L. 3 ditto ditto 20 ditto.

The following South Down tups were then exhibited, and put up to be let.

No. 1. at 10 guineas.
2. at 40 ditto.
3. at 30 ditto.
4. at 25. ditto.
5. at 30 ditto.
6. at 80 guineas.
7. at 50 ditto.
4. at 40 ditto.
9. at 120 ditto.
10. at 25 ditto.

All of which were let, except No. 7. and No. 9.

Mr

Mr Garrard exhibited a model of a piece of the loin of Mr Smith's fat three-ſhear weather, which won the premium at the ſheep-ſhearing in 1799.—The fat meaſured ſeven inches.

Mr Johnſon, an eminent farmer near Northampton, exhibited twelve fine ewes, and ſold them all.

After three o'clock they adjourned to the Abbey to dinner; but on account of ſome engagements of his Grace, it was not ſerved up till five o'clock.

After dinner, the following toaſts and ſentiments were drank—The King—Succeſs to Agriculture—The Thraſhing Mill—Small in Size, and great in Value—A good Crop of Wheat—Drilling—Breeding in all its branches—Succeſs to Experiments——The Fleece—The Plough—Grazing—The Tup Trade—To the Memory of Mr Bakewell—Mr Coke—Lord Winchelſea—Sir Charles Davers—Lord Lauderdale.

When the cloth was removed, the cups to be given by his Grace, as premiums, were put on the table; and his Grace informed the company, in an adreſs, of the determinations of the Committee which had been appointed to inveſtigate the different claims. He began with the premiums offered for the diſcovery of implements of huſbandry; and ſtated, that the Committee had examined the corn-dreſſing machine belonging to Mr Cooche, and the ſcuffling harrow belonging to Mr Leſter, both of which they highly approved; but, as they had obtained patents, they did not think them entitled to premiums; and they were of opinion, that none of the other implements exhibited were deſerving of the prize.

The next premiums were for encouraging the introduction of the new Leiceſter and South Down breed of Sheep in Bedfordſhire.

No. 1. To the perſon in Bedfordſhire who ſhould, between June 1799 and Chriſtmas following, expend the largeſt ſum of money (not leſs than ſixty guineas) in the purchaſe of breeding ewes, or theaves of the Leiceſter or South Down breed, a premium of fifty guineas.

No. 2. A premium of twenty guineas to the perſon who ſhould expend the next largeſt ſum in the ſame object, and on the ſame conditions.

His Grace ſtated, that the candidates were, Mr Parkins of Dunſtable; Mr Bailey of Marſton; and Mr Runciman of Woburn: And the Committee, on inveſtigating their claims, found that Mr Parkins had expended 168l. Mr Bailey 126l. and Mr Runciman 102l. He was ſorry to ſay, they had not ſtrictly complied with the conditions: however, under all theſe circumſtances, the Committee determined that Mr Parkins was entitled to the premium of fifty guineas, and Mr Bailey to the premium of twenty guineas.

PRE-

PREMIUMS FOR FAT WETHERS.

No. 1. To the perſon who ſhould breed, and produce at Woburn Sheep ſhearing, 1800, the beſt two ſhear fat wether, the premium of a cup, value ten guineas.

No. 2. To the perſon who ſhould breed, in Bedfordſhire, and produce at Woburn Sheep-ſhearing, 1800, the ſecond beſt two ſhear fat wether, a cup, value five guineas.—The ſame perſon not to have both premiums.

The former, the Committee adjudged to Mr Cowley of Aſpley; and the ſecond to Mr Platt of Lidlington,

PREMIUMS FOR THEAVES BRED IN BEDFORDSHIRE,

No. 1. To the perſon who ſhould breed, in Bedfordſhire, and produce at Woburn Sheep-ſhearing, 1800, the beſt theave, a cup, value ten guineas.

No. 2. To the perſon who ſhould breed, in Bedfordſhire, and produce, at Woburn Sheep-ſhearing, 1800, the ſecond beſt theave, a cup, value five guineas.

The former was adjudged to Mr Butfield of Poſtgrave, and the latter to Mr Bennet of Temsford.

His Grace then concluded, by congratulating the company upon the progreſs in Agricultural Improvement which had been made, and by exhorting them to perſevere in their laudable exertions.

PART IV.

Agricultural Intelligence.

Perhaps at no period within our remembrance, was it a more difficult object, to preſent an accurate deſcription of the rural economy of Britain, than at preſent; and the cauſes which occaſion this difficulty, may be ſuppoſed obvious to the moſt ſuperficial obſerver. The ſtate of the public mind does not leſſen the difficulties naturally attending the arrangement of ſuch diverſified details, though it ſtimulates us to be as corre

correct as poſſible in the different articles of intelligence which we are now to give. Diſtreſſed by the extraordinary prices of the neceſſaries of life, we are not ſurpriſed to find, that the judgment of the moſt liberal-minded individuals ſhould be biaſſed when the ſtate of the country is under conſideration. In their anxiety to procure relief, they eagerly caſt their eyes upon the preſent crop, and fondly expect that the calamities under which they ſuffer will be effectually removed when it arrives at maturity. It would have afforded us the moſt heart-felt gratification, could we, at this time, have cheriſhed ſuch hopes; but while we will not exaggerate the diſtreſſes of the country, we are equally determined not to create expectations which, in all human probability, will not be gratified.

In this leading article, it is not our deſign to do more than give a ſuccinct deſcription of all rural affairs during the paſt quarter, and to offer a conciſe opinion reſpecting the probable conſequences. This ſhall be formed from the beſt information which it has been in our power to collect.

The weather, during the months of April, May, and June, has, upon the whole, proved unfavourable to the growth of corn and graſs in North Britain, which occaſions every kind of grain to be a ſtage behind, at this advanced period of the ſeaſon. The wind has generally blown from the eaſtern points, and been attended with an uncommon degree of cold, ſeldom prevailing for ſuch a length of time. The month of April was friendly to vegetation, and appearances were then very promiſing. The firſt three weeks of May changed this flattering proſpect; and a ſevere drought, accompanied, at times, with high gales from the weſt, has prevailed, upon the eaſtern coaſt, through the whole of June, which has checked vegetation in every quarter, and ſeriouſly threaten to diminiſh the crop of the moſt favoured diſtricts.

The effects of the laſt deplorable ſeaſon, upon the current crop, now appear, in various ways, in the ſeveral diſtricts, according to the nature of the ſoil, the perfectneſs of labour beſtowed, and the ſtate of the weather when the ſeed was put into the ground. To ſpeak in general terms, the rich dry lands upon the ſea-coaſt, and the deep loams in the inland parts of the country, which were in good heart, have not apparently received any material injury from the exceſſive wetneſs of laſt Winter, unleſs the poſtponement of the wheat-ſeed till the Spring months, and the vegetation of immenſe quantities of weeds, are to be conſidered in that light: But,

upon

upon thoſe extenſive tracts, where clays of different varieties, and ſoft moriſh ſoils, are predominant, the conſequences are of a different nature. There the wheat could not, in numerous inſtances, be ſown with the leaſt proſpect of advantage. The Spring grains have made an imperfect braird. The ſurface, after being harrowed, baked into a ſtrong cruſt or paſte when dry weather ſet in, which ſtinted the growth of the young plants; while the coldneſs of the ſubſoil, from the quantity of moiſture lodged in the veins of the earth, leſſened their paſture, and kept them in a languiſhing and unthriving ſtate.

The grub-worm has, this year, made greater ravages than common, eſpecially among oats ſown after graſs; and its increaſe may ſafely be aſſigned to the ſuperabundant moiſture of laſt ſeaſon. Several fields have been nearly deſtroyed by the attacks of this deſtructive animal; and perhaps the loſs ſuſtained is greater than ever experienced in North Britain. In the northern counties of England, we learn that the Winter wheat has ſuffered in a ſimilar way.

The markets for grain, notwithſtanding the extenſive importations, have not declined; and in the article of wheat, they have lately met with a conſiderable advance. Without this importation, it is is indiſputable that a degree of ſcarcity would have been felt in Britain, ſimilar to that which prevailed at the concluſion of the preceding century, when corn could hardly be procured, during the Summer months, upon any terms. From the cuſtom houſe returns, it appears that above half a million of quarters of wheat have already been imported into London; and it is believed that nearly the ſame quantity has been received at the outports.

Wool, from the intended union with Ireland, or an increaſe of manufactures at home, promiſes to riſe in price. According to ſeveral accounts, very little is yet ſold, though the ſellers, in every inſtance, are looking for an advance.

Butcher-markets have, during this quarter, arrived at a pitch never known in Britain at the moſt perilous time; and though now ſomewhat reduced, ſince lamb became plentiful, yet, from the great failure of the graſs crop, and the avidity with which purchaſes are made, it is more than probable that, in the article of beef, they will not ſoon return to their ordinary level. The riſe has been general over the whole iſland, and has occaſioned a number of half-fed beaſts to be ſlaughtered, which, under different circumſtances, would ſtill have remained in the hands of the graziers.

It

It gives us pleaſure to mention, that the moſt ſedulous attention continues to be generally paid to the condition of the lower ranks; and we cannot avoid recommending that this ſhould be ſteadily perſevered in, ſo long as the prices of the neceſſaries of life continue at advanced rates. It is indeed phyſically impoſſible that ſuch can ſupport their families, unleſs relief is afforded them in this way, or the rate of wages increaſed in an equal manner to the riſe upon proviſions.—Were markets to remain ſtationary, the latter alternative would be moſt expedient; but as that is out of the queſtion, every motive of duty and philanthropy calls loudly upon thoſe gifted with the means, to provide for their wants. The uncommon exertions of the higher ranks, during this memorable year, do them the greateſt honour, and ought to be recorded for the benefit of poſterity, in caſe the country, at a future period, ſhould be viſited with a ſimilar calamity.

Notwithſtanding the extent of the preſent diſtreſs, there is cauſe to apprehend that a change will not take place ſo early as is devoutly to be wiſhed. Independent of the ſcarcity and high rate of markets, which would operate with great weight againſt the effects of the moſt productive crop, ſeveral circumſtances concur to render the proſpect very alarming. A ſmaller quantity of wheat was ſown this year than common; and the general look of that grain is much below a medium. Many fields of Spring grain were imperfectly managed, both in reſpect of cultivation and ſeed; and the extent of the ground under crop, in the higher diſtricts, was neceſſarily curtailed. If we take into account the ſmall quantity of barley, oats, and beans on hand, and view the aſpect of the crop with an unprejudiced eye, the warrantable concluſion would not be ſuch as to afford cauſe for expecting conſiderable relief. Still, after all, the crop may prove more productive than expected, as it is the ſtate of the weather in July and Auguſt that regulates, in a great meaſure, both the quantity and quality of grain. In a word, the crop upon the ground threatens to be of leſs bulk, and the harveſt in moſt places later than ordinarily happens. Yet it is impoſſible to ſpeak with preciſion reſpecting its value, though the preſent appearances are far from being favourable.

Extracts from Private Correspondence.

SCOTLAND.

Ayrshire Quarterly Report.

The weather, during the months of April and May, when the greateſt part of our corn is ſown, was very bad, and of courſe a conſiderable extent of land received imperfect cultivation. This, joined with the bad ſeed ſown in the higher diſtrict, occaſions the fields to look ill, and, upon the whole, more backward than laſt year.

Not much wheat is raiſed in this county; but the fields carrying that grain may be considered as in a thriving ſtate. Barley and beans are alſo not ſown in quantities; but, for the ſeaſon, theſe grains have a tolerable appearance. Oats are our principal grain, and look badly; much damaged ſeed was ſown, and the grub worm has done much injury.

The potatoe fields were much enlarged this year, and at preſent they have a very favourable appearance. The diſorder called the *curl*, is hardly known with us. Turnips are litle ſown in this county; and a greater breadth of ground is not occupied with them than in former years.

The grain markets in the month of May were ill ſupplied; but, during this month, a fuller qnantity has been preſented. Our current prices are as follows:

Wheat, *per* boll of 4 Wincheſter buſhels,			48s. to 60s.
Beans,	ditto	ditto	48s. to 53s.
Barley,	ditto	8 ditto	60s. to 80s.
Oats,	ditto	ditto	54s. to 60s.

Meal, *per* peck of 8lb., 3s. 3d. to 3s. 4d.

Quartern loaf of bread, 1s. 7½d.

Potatoes, 14 pints to the peck, 2s.

Butter, *per* lib. of 24 ounces, 1s. 2d. to 1s 4d.

Fat cattle from 8s. to 12s. *per* Dutch ſtone, ſinking the offal. Retail price of beef, 8d. to 11d. *per* lib. of 24 ounces. Mutton and lamb at ſimilar prices; the quality very bad. Veal, from 3d. to 7d. Wool, from 5s. to 20s. *per* ſtone of 24 lib. Engliſh Hay, from 10d. to 1s. *per* ſtone.

The hay crop looks very ill; a great part of it will not cut; and the paſture graſſes were never ſeen worſe in this county.

June 21ſt.

Berwickshire

Berwickshire Quarterly Report.

The paſtures of this quarter have, in general, exhibited a ſcanty appearance; but this muſt, in ſome meaſure, be attributed to the operation of adventitious circumſtances; ſuch as, the failure of laſt turnip crop, which threw an unuſual quantity of ſtock upon paſture fields during the Winter; the high price of corn and hay, which induced farmers to turn their horſes early to graſs; while, in many caſes, a want of fodder drove cattle from the ſtraw yard, before vegetation was ſufficiently advanced to ſupport them in the field. The drought is beginning to be ſeverely felt on the dry ſoils.

The hay crop, upon cold clay ſoils, is very light; where the ſoil is free, the appearance is more favourable; but, from the cold weather in May and June, and many fields having been paſtured in the Spring, hay harveſt muſt be late, and the produce will not equal the average of ordinary years. The young clovers of this year, in general, promiſe well.

The experience of 1800 will ſtrongly inculcate the neceſſity of being particularly attentive in the choice of ſeed corn; for never was the produce from ſeed of different qualities ſo eminently conſpicuous, as in the appearance of the crops this ſeaſon.

Winter wheats ſtill continue thin and weak; Spring ſown fields are thicker; and where the preceding turnip crop was weighty, the wheat is looking well.

Barley upon ſtrong clay ſoils, is, in general, but a poor crop; where it ſucceeded turnip, the appearance is in general favourable; ſeveral fields are juſt beginning to ſhow the ear.

Oats have a more promiſing appearance than any of the other grains, though, upon ſome wet clay ſoils, they alſo look weak and thin.

Peas are generally thin, and in many caſes very bad; both wheat and peas occupy a much ſmaller extent than uſual; and as neither of theſe crops are likely to make a large return per acre, the aggregate produce of this county, in wheat and peas, muſt fall greatly ſhort of former years.

From ſo much of the land having been ſtirred wet, the fields everywhere exhibit an unuſual blow of yellow annual weeds. In Lammermuir many of the fields make a very thin appearance, from having been ſown with froſted grain; and in ſome ſpots towards the eaſt end of the lower diſtrict, conſiderable damage has been done by the ſnail and ſlug.

This quarter has been uncommonly favourable for the preparation of turnip-fallows; which, from the high price of ſeed laſt Winter, will be ſown to an unuſual extent: The ſeed has every-

where vegetated freely, and the young plants have in general a healthy appearance. Potatoes are a fine crop, being free of the curl in general.

The prices of both fat and lean ſtock kept advancing till towards Whitſunday, ſince which they have been upon the decline: The demand for lean ſtock to the Engliſh market, has been rather leſs than uſual during this quarter.

Nothing can yet be ſaid with certainty as to the price of wool; the ſale of that article being ſcarcely commenced on this ſide of the Tweed.

From the ſmall quantity of grain in the hands of farmers, very little has been doing in the corn markets of late.

Prices at Berwick, June 28th, per boll of ſix Winchester buſhels.

Wheat, 60s. to 80s.	Oats, 40s. to 45s.
Beans, 65s. to 70s.	Barley, 40s. to 50s.

Butcher meat, which was at one time as high as 10d. per lib., has, during this month, been gradually on the decline. Prices at Berwick, June 28th, were as follows:

Beef, 8d. Veal, 6d. all per lib. of 16 ounces Engliſh.
Mutton, 8d.

June 30.

Extract of a Letter from a Gentleman in the Eaſtern part of Berwickſhire, dated June 29.

"About three weeks ago, I was led, by buſineſs, to the weſtern extremity of this county, at Leader foot, to which I went by Kelſo, St Boſwell's, and Melroſe, and back by Mellerſtain, Greenlaw, and Dunſe, by which I ſaw near 70 miles of country. To my view, things by no means looked well. Wherever the land is ſtrong, or on a cold retentive bottom, the crops of corn and graſs were wretched, and the paſture miſerable. On dry-bottomed turnip ſoils, every thing looked well, but late. Since my return home, however, the crops on the laſt kind of land in my neighbourhood are puſhing forward faſt. Turnip work is backward, from the late Spring and worn-out ſtate of the horſes; but it works famouſly. Without rain ſoon, I fear a great loſs in that crop, as the *quicken* requires much working, which dries the ſoil ſadly. Annual weeds everywhere abound far beyond common. Generally ſpeaking, my farm is dry land; and where the culture has been legitimate, the crops are excellent. Some that I got laſt year from the hands of a ſmall farmer, one of your favourites of the theoriſt, and which I had to manage as I beſt could, till I worked to windward, is poor enough, yet better than the beſt managed cold bottomed. Hay crops on cold land, and all that was late eaten, does not offer any decent proſpect.

On

On good dry land, Winter and Spring hained hay looks well; but of these there is very little in this part. In Berwick bounds, a ſhilling the ſtone of 24lb. has been refuſed for hay from the rick: Not that any is yet cut; but I believe I ſhall begin to cut next week."

East Lothian Quarterly Report.

The weather which, in April, was friendly to vegetation, has during the greateſt part of the two ſucceeding months, been remarkably cold and tempeſtuous, and the growth of corn and graſs has conſequently received a ſevere check: this, when added to the critical ſtate of the ground, from the exceſſive wetneſs of laſt Winter, and the imperfect cultivation which circumſtances, in too many caſes, only allowed to be given, renders it highly probable, that the current crop will be much inferior to thoſe of ordinary years.

A conſiderable leſs quantity of wheat was ſown this year than uſual; and, perhaps, three-fourths of it was put into the ground during the mounths of February and March. The appearance of the greateſt number of fields is such, that a ſhort crop of this grain may be expected. Barley, upon dry healthy ſoils, is a tolerable crop. Some of it is already fully in the ear, and, upon the coaſt ſide, may be ready for the ſickle in Auguſt; but, upon thin clay, and ſoft mooriſh ſoils, it is hardly off the ground, and is, almoſt in ever caſe, ſickly and unthriving. Oats are looking better in the inland parts of the county than for ſome time paſt, the blanks occaſioned by the grub being partially filled up; but upon the dry coaſt ſide land, where they lately diſplayed a vigorous growth, the drought has injured them ſeverely Beans are worſe this year than uſual, eſpecially upon cloſe-bottomed ſoils, being generally thin, unhealthy, and getting into bloom before they are arrived at any length. Peas, upon clean lands, look well; but, as the quantity ſown is very trifling, their effects hardly deſerve to be noticed in an eſtimate of this kind.

The hay crop, except upon the dry healthy land, is very light, and in few place will exceed 150 Scots ſtones per acre. Some of it is already cut, and will be of fine quality, if dry weather continues. Some fields have been ſet at 12l. to 15l. per acre; but no price from the rick is yet ſettled, though 1s. per ſtone is ſpoken of. Preſent price of old hay 18d. but little remains on hand.

The paſtures are generally very bare; and without warmth and temperate rains, will not afford a full bite this ſeaſon. The early ſtocking contributed to nip them up at the ſtarting; and the cold eaſterly winds blaſted the young plants, extracted the moiſture ne-

ceſſary for their growth, and hardened the ſurface ſo much as to prevent their future progreſs.

The potatoe fields never looked better; and promiſe ſtubſtantial relief to the poor, during the following year. Much the ſame extent as uſual is planted in this country; but the ſhow being univerſally good, a double crop to that of the laſt may be ſafely expected. Notwithſtanding the apparent badneſs of the ſeed, ſcarce a ſingle blank is ſeen, and the *curl* is only in a few inſtances diſcernible Perhaps the abſence of this fatal and common diſeaſe may be attributed to the unripeneſs of the plant when taken up laſt Autumn, which is the only probable cauſe that can be aſſigned. In the high diſtrict of this county, where the climate ſeldom permits them to arrive at maturity, the *curl* is ſcarcely known; whereas, in the low diſtricts, it is never miſſed after an early harveſt, unleſs freſh ſeed is brought from late ſituations.

Though the coldneſs of the weather has been injurious to the growing crops, it has proved very advantageous in the working of the turnip and naked fallows, which have this ſeaſon received complete juſtice. The repeated dry furrows given, will, in a great meaſure, counteract the bad effects of the laſt Winter, and remove the degree of acidity thereby lodged in the ground. Without moiſture, however, the heavy lands will be all to *force* with the brake and roller; for they are ſo hard, that, without theſe auxiliaries, it will be impoſſible to reduce them to a proper tilth. Perhaps this is the manner in which the moſt of farmers incline to work their fallow, though it is ſevere upon the labouring ſtock, and increaſes the expence of this neceſſary operation.

The quantity of land ſown with turnip, is this year greatly increaſed; but, if ſufficient moiſture does not ſoon fall, one half of them will not vegetate. Seed has been exceedingly ſcarce, and, in ſome places, could with difficulty be procured. The early ſown fields promiſe well, and ſome are already thinned and ſet out: but the greateſt number are either ſpringing imperfectly, or making no appearance. Much loſs was ſuſtained upon the ſoft ſoils, from the drills being blown by the high weſterly wind on Friday the 20th current.

The grain markets have fluctuated much in the courſe of this quarter, eſpecially for wheat and oats. Wheat has, for a month paſt, ſteadily advanced, in the face of a large importaion; which is a ſure proof that the quantity on hand, of laſt year's crop, is not great. Current prices are from 50s. to 60s. per boll of 4 firlots, the firlot being about 3 per cent. larger than the Wincheſter buſhel. Beans, per ſame meaſure, from 46s. to 53s. Barley, per boll of nearly 6 Wincheſter buſhels, from 50s. to 56s. And oats, which

at

at one time, were as high as 57s. per boll, of ſame ſize, have, for ſeveral weeks, ſold at 48s. and 51s.

The demand for fat cattle has fully equalled the number fit for killing; but prices, owing to inferiority of quality, and the plentifulneſs of lamb, have of late decreaſed from 15 to 20 per cent. In the middle of May, decent beef was worth 12s. 6d. per ſtone of 17½ lb. ſinking the offal; but it now may be conſidered as not exceeding 9s. upon an average. Mutton is rather lower. Lamb, if good, much the ſame price as mutton. From the barrenneſs of the paſtures, it does not appear that beef, in this diſtrict, will be plentiful during the ſeaſon.

Gifford Summer fair (the only one of conſequence in this county) was well attended; but the demand for lean ſtock was very limited. Few good horſes were preſented, and a great number of ſheep remained unſold.

An unuſual quantity of yellow weeds infeſt the greateſt part of the arable fields this ſeaſon, which from the ſtrong drought, will prove pernicious to the ſeveral grains with which ſuch fields are occupied. Even the clays are full of them. Perhaps their increaſe is owing to the wetneſs of laſt Summer, and the repeated black froſts which prevailed from December to March. The ſtrongeſt ſoil was thereby looſed to ſuch a degree, as enabled the ſeeds of theſe weeds at once to vegetate, after the ground was reduced by the harrow in ths Spring months.——*June* 30.

Extract of a Letter from a Gentleman in the neighbourhood of Perth, dated June 28.

"The wheats in this diſtrict are generally conſidered as a light crop, and rather more backward than uſual. The oat crop upon wet ſoils has failed much; and, in ſome places, the grub-worm has done a good deal of injury where the ground is dry: oats are tolerably good. The growth of barley is not ſo far advanced as to admit the forming of a preciſe opinion reſpecting that crop, eſpecially upon ſtrong ſoils. Beans appear to be a ſcanty crop

The markets are not well ſupplied with grain; indeed, we have little or none, but what is brought from abroad. The price of oat meal is 3s. 2d., and barley 2s. per peck, of 8lb. Dutch weight Bread is not ſold in this county by the quartern loaf, as the weight varies according to the markets, but not the price. Hay is 1s. 6d. per ſtone of 22lb.; and as to the wool, I have not been able to learn, with any degree of certainty, the different prices, as the ſheep are but newly ſhorn.

I am rather of opinion, that there are not ſo many acres ſown with grain this ſeaſon as uſual; but think the potatoe fields conſiderably enlarged: in general, they make a promiſing appearance

The butcher market in Perth is but indifferently ſupplied. Principal pieces of beef ſell at 9d. per Dutch lib.; but there is little of good quality to be got. Lamb 9d.; veal 8d.

As to the crop of graſs; the hay fields are very light, and the paſtures much inferior to what they are in ordinary years."

Extract of a Letter from a Reſpectable Houſe in Glaſgow, dated June 30.

"We ſhall endeavour to give you as accurate accounts of the current crop in this neighbourhood, and of the markets here, as in our power. In the vicinity of our city, the lower ward of Lanarkſhire, there is little variation in compariſon with laſt year, reſpecting the forwardneſs of the crop. We have only a ſmall quantity of wheat ſown this ſeaſon, and it looks worſe than common. Not much barely is ſown; but the length it has come, only enables us to ſay, that the braird is middling. Such parts of the oat fields as were early ſown, look tolerable; but all the late fields have a very poor appearance. Beans, in general, look well. There never was ſuch a quantity of potatoes planted here: in general, they are very late, a great part of them only coming above ground, ſo that the curl cannot be diſtinguiſhed. No contracts for a future delivery are yet made.

The few turnips cultivated here are in drills; but the quantity is ſo trifling, that they are not worth mentioning. Hay has a poor apearance, and promiſes, at moſt, to be only a middling crop. Preſent prices of old hay are from 10d. to 1s. per Tron ſtone of 22 lb. The paſture graſs is very poor. Cattle, ſheep, and lambs, all ſell at high prices; and the retail price may average 1s. per lb. Tron weight.

We have had little or no grain imported *direct* to this market, as it is entered in general at Borrowſtounneſs Cuſtomhouſe, when ordered from the Baltic, and forwarded from thence in lighters. Such cargoes as are received from America and Ireland, are entered here; but there have been none imported from the former country as yet, except two cargoes of wheat, which were afterwards ſent to the Iriſh market. About 5000 barrels of flour have been received from America, which ſold from 70s. to 75s per barrel of 196 lb. We have had no particular information reſpecting crops to the weſtward, but believe they look very middling.

Our

Our current prices here are,

Scotch Wheat	48s. to 55s.	per boll.
Barley	40s. to 48s.	
Bear	35s. to 42s.	
Oats	40s. to 45s.	
Beans	none.	
Oat meal	46s. to 54s.	
Foreign Wheat	52s. to 65s.	
White Peas	63s. to 70s.	
Oats	42s. to 45s.	
Engliſh Wheat	50s. to 60s	
Barley	49s. to 54s.	
Beans	52s. to 56s.	
Peas	60s. to 63s.	
Oats	45s. to 54s.	
Flour	100s. to 105s.	per ſack.

Our wheat is all meaſured by the Linlithgow ſtandard firlot, which is a trifle above Wincheſter; but the meaſure for beans is about 7¼ per cent. larger than the Linlithgow ſtandard. Oats and barley are ſold by the Stirlingſhire boll; that is to ſay, our boll of theſe two grains is nearly one peck more than ſix Wincheſter buſhels."

Extract of a Letter from a Farmer in Aberdeenſhire, dated June 26.

"Cattle in good condition ſtill ſell high, though not ſo dear, by 1s. 6d. per ſtone, as in the month of May; but lean cattle are almoſt unſaleable, on account of a want of graſs. Our grain crops, on light lands, look much better than the badneſs of the braird led us formerly to expect; but cold and backward ſoils are as yet making a bad appearance, and I am much afraid that the crop upon them will turn out very indifferent. As for the hay, it is hardly worth the cutting; and the paſtures are exceeding bad, owing, in a great meaſure, to the ſtate of the weather, which continues cold and dry. Our turnips are about all ſown; and we have been favoured with a famous ſeaſon. A greater quantity of ground has been prepared for this branch of huſbandry than uſual. There is not ſo great apprehenſions entertained now about a ſupply of grain as lately: but, as the crop will be late, eſpecially if growing weather does not ſet in, there neceſſarily muſt be a greater degree of ſcarcity before harveſt than has yet been felt. Potatoes are this year planted to a great extent, and appear to do well, which will be the firſt ſubſtantial relief to the diſtreſſed poor. You would be aſtoniſhed at the ſmall quantity of meal which is conſumed, even in large families,

milies, at this time, ſince milk became plentiful. Indeed, it makes good the old ſaying, That *want* is an excellent maſter for teaching economy.

I ſhould have mentioned, that, of all our crops, *barley* and *bigg* are looking beſt: and an increaſed quantity of theſe varieties are ſown this ſeaſon in the whole of Aberdeen and Banffſhires; which will make amends for a ſcanty crop of oats. I am afraid that *winter keep* for cattle will not be plentiful, unleſs a great alteration for the better ſoon takes place. In Murrayſhire, the crops, upon the whole, look well; but they are ſadly in want of rain. As for graſs, they have little or none; and if the dry weather continues, I think they may have an early harveſt, but that the crop will be ſhort."

Mid-Lothian Quarterly Report.

From April 1ſt to June 30th, incluſive.

There have been few ſeaſons wherein the operations of huſbandry have met with leſs interruption than during the time above ſpecified. The weather, although by no means remarkably genial, has always allowed the farmer the full uſe of his cattle and implements; and tillage, of courſe, has been carried on with ſpirit and vigour. The appearance of the crop is, however, not altogether ſo promiſing, as the favourable ſeed-time ſhould have led one to expect. The wheat, as formerly noticed, ſown in a very unfavourable condition, continues ſtill feeble and languid, and, hardly yet beginning to ſhew the appearance of the ear, gives room to expect a late harveſt, as well as a ſcanty return. The hay-lands are in general defective in clover, which alone would have the effect to make a light crop; were it not even ſtill further diminiſhed in bulk, from the ſtinted growth of the other graſſes, owing to the intenſe drought, accompanied with a conſiderable degree of cold, which has diſtinguiſhed the commencement of the Summer ſeaſon. The bean and peas crop is very diſſimilar, part being excellent, and part very bad; owing, perhaps, to the previous ſtate of the ſeed when ſown. On the other hand, the barley, ſown in capital order, may ſtill be a good crop, ſhould ſuitable rains arrive in time; as would likewiſe the oats, if the ſame much wiſhed-for occurrence takes place. The potatoes appear to be good; and, what is an agreeable circumſtance, more of them have been planted than uſual. Turnip has been ſown to a conſiderable extent, and the land in fine condition: a moſt boiſterous ſtorm, however, from the north-weſt, on Friday June 20, is ſaid to have occaſioned much damage to this root, as well

well as to other ſpecies of crop. But *farmers are always complaining*; which is the more unreaſonable at the preſent moment, when we have it officially announced, as uſual, in the newſpapers, (founded on many well authenticated auguries from bee-hives and bird-neſts), That the preſent crop is to be the GREATEST IN THE MEMORY OF MAN.

Prices continue not only high, but to increaſe: Of this, however, the farmers can now clearly waſh their hands, as not one of them in twenty has a ſingle grain to diſpoſe of. To the port of Leith, the country now turns its eyes. The importation there has, happily, been very extenſive; and, there is room to hope, will be able, at whatever price, to inſure from famine; particularly owing to the exertions of the Friendly Societies, who have imported almoſt one fiftieth part of the whole.

The following have been the current prices of grain, &c.

	April. *Shil.*	*May.* *Shil.*	*June.* *Shil.*
Wheat, per boll, from	47 to 50	44 to 55	48 to 60
Barley, ditto	43 — 50	50 — 52	48 — 52
Oats, ditto	43 — 53	40 — 45	42 — 46
Beans and Peas, ditto	44 — 50	45 — 50	46 — 50
	d. *d.*	*d.* *d.*	*d.*
Oat-meal the peck,	35 — 42½	38 — 42	38

Potatoes, during ſeed time, as high as 2s. 6d. the peck; and even for the table have ſince not been under 2s.

Butcher-meat was alſo uncommonly dear, having gone as high as from 10d. to 12d. the lib.; but, of late, from the influx of lamb and other graſs fed meat, is become more moderate. But nothing appeared ſo extravagant in price as freſh butter, which, during the months of April and May, ſold at from 20d. to 2s. the lib. of 22 oz. Aſſociations were repeatedly endeavoured to be formed to reduce its price, by refraining from the uſe, but to no purpoſe; for, although this conſpiracy and combination was openly recommended from the newſpapers, yet the rate continued undepreſſed, till, in the courſe of the ſeaſon, (from the return of good paſture increaſing the quantity), the price was reduced through natural means. It ſells now at from 1s. to 16d.

Return

Return of grain of all kinds, flour, meal, and hulled barley, imported and exported at Leith, from February 23d to July 5th inclusive. The whole reduced to quarters, of 8 bushels each, reckoning a ton of flour equal to 7 quarters of wheat; a ton of hulled barley equal to 8 quarters of barley; and 4 bolls oatmeal equal to 3 quarters of oats:

Week ending	*Imported coastways.*	*Imported foreign.*	*Exported coastways.*
March 1.	1654	none	93
8.	2297	none	976
15.	3560	none	815
22.	2403	none	667
29.	1048	none	466
April 5.	1742	none	558
12.	1900	none	821
19.	1367	none	1006
26.	7261	none	1322
May 3.	5307	1176	408
10.	3586	2860	1238
17.	5566	3343	2040
24.	8977	5837	2782
31.	5812	4435	2288
June 7.	3220	2972	3786
14.	1056	2771	1747
21.	936	2284	1220
28.	2202	8350	2656
July 5.	656	3180	1809
Total	60,550	37,210	26,699

Coastways	60,550
Foreign	37,210
Total	97,760
Deduct exported	26,699
Remains	71,061

It is computed, that the city of Edinburgh, town of Leith, and adjacent suburbs, consume weekly, in bread corn of all kinds, about 3000 quarters; and, for several weeks past, besides what is exported by sea from Leith, there have been about 1000 quarters weekly sent from thence, by land-carriage, into the interior of the country.

ENG-

ENGLAND.

Extract of a Letter from a Correſpondent at Hull, dated June 20.

Our wheat market has of late been ſupplied with foreign grain, of which the importation is conſiderable. Beſt Dantzic ſort ſold on Tueſday at 126s. per quarter, of 8 Wincheſter buſhels which, the preceding week, fetched only 120s. Inferior qualities from other parts down ſo low as 100s.

Oats.—Few at Market. None ſold this week: but prices on Tueſday ſe'ennight were from 44s. to 57s. Beans, none on hand. A few pidgeon beans ſold laſt week at 78s. Rye 90s. to 95. Hay from 5l. to 6l. per ton.

Butcher meat very variable. The average may be, for pork 6½; mutton 7½d; beef 9d; veal 7d.; all per pound of 16 ounces. Beef to ſhips, taking the whole carcaſe, 68s. per cwt.

Flour.—Fine 5s. 6d. to 5s. 8d. per ſtone of 14lib. Bread 4s 10d. per ditto. American ſuperfine flour, in barrels, ſold to private families at 75s. per barrel, containing about 14 ſtone. Potatoes 1s. 3d. per peck; they were very ſcarce both with the farmers and dealers. New crop from 8d. to 1s. per pound weight.

Wool.—It is hard to ſpeak reſpecting the price of this article. The farmers aſk from 21s. to 25s. per tod of 28½ lib.; but none is as yet ſold higher than 22s.

Lintſeed, 63s. per quarter.
Rapeſeed, 52l. 10s. per laſt.
Lintſeed cakes, 10l. 10s. per ton.
Rapeſeed ditto, 7l. per ditto.

Graſs on ſheltered and dry lands promiſes well. On low or flat lands, where the water covered it in Winter, very indifferent. If warm weather commences ſoon, and moderate rains follow, there is no fear of a full bite.

Wheat has the worſt appearance of the ſeveral grains. In low lands it is ſtarving; but ſome of the dry ſoils have a promiſing appearance. Upon others it is indifferent, and much injury has been ſuſtained by the ſlug. This as well as other grains, ſtands much in need of warm weather. A deal of bad ſeed was ſown, which did not vegetate; and moſt of farmers think, that from one half to three fourths of a good crop is all that can be expected.

Oats

Oats look tolerably well. Beans beſt of all. Barley only middling.

Milk ſell at 2d. per quart, equal to a chopin of your ſpirit meaſure. Butter 1s. per lib. of 16 ounces.

In our future communications, we truſt we will be enabled to tranſmit you more extenſive intelligence; and be aſſured, that, in the above particulars, we have ſtudied correctneſs to the uttermoſt of our power-

Lincolnſhire Quarterly Report.

The ſtate of the growing crops of corn in this county is as follows: Wheats are very thin, and much inferior to what they have been for ſeveral years. A great many of the plants periſhed during the Winter months, which gives cauſe to fear that the preſent crop will be a deficient one. Spring grains are, in general, much as uſual. Barley and oats have a promiſing appearance, with the exception of the marſhes; for, in ſome parts of theſe, the condition of the crop is truly melancholy, having, in the firſt inſtance, been nearly deſtroyed by the coldneſs and wetneſs of the ſeaſon, and latterly by the attacks of the grub-worm. It is an abſolute fact, ſurpriſing as it may appear, that ſome farmers in theſe ſituations would at this time take conſiderably leſs for their crop than they gave for its ſeed. Beans and peas do not look ſo well as in ordinary years. Perhaps, taking the whole county, the crop, upon an average (making the above exceptions), may be conſidered nearly as good as uſual.

The crops of artificial graſs are not likely to be productive, on account of their growing in an irregular patched manner, having ſome parts well ſtored with plants, while others are naked altogether. This is pretty general, and can only be attributed to the wetneſs of the weather; for, if the ſeed had been bad, the effects would have been uniform. The natural meadows, it is to be hoped, will make up for the failure of the artificial graſſes, as they, upon the whole, make a luxuriant appearance.

Fat beaſts are ſcarce, and feed very ſlow, which is owing to the extreme coldneſs of the weather. Some of the paſtures are quite ſtarved, and, of courſe, very deficient of graſs. Fat ſheep are coming to be tolerably plentiful. Preſent prices of butcher-meat: beef 8½d. to 9d. per lib.; mutton 7d. to 7½d.; veal 7d. to 8d.; lamb 8d. to 9d. Of the laſt article, not many have been ſlaughtered this ſeaſon.

The prices of grain are, wheat from 115s. to 120s. per quarter; barley 50s. to 70s.; rye 70s. to 80s.; oats 49s. to 56s.; beans 80s. to 90s.; all Wincheſter meaſure.

The

The clippings of ſheep, or ſhearings, are now going on here; but the fleeces, in general, are thought to be lighter than laſt year. The prices are not yet aſcertained; but 25s. per tod of 28 lib. is expected. Ewe wool is ſuperior in quality to that of laſt year's growth.

Potatoes promiſe to be an excellent crop; and it is hoped that the goodneſs of this valuable eſculent will, in a great meaſure, compenſate for the apparent deficiency of the wheat crop.

The ſowing of turnip has been general throughout the county; and, ſhould the weather continue dry, good crops may be expected, where tolerable management has been practiſed. The broadcaſt method of ſowing is cuſtomary in this county; and, when the manure is ploughed into the ground the ſame day it is laid on, it is found to anſwer beſt.

The ſmall farmers of this county have ſuffered exceedingly from the late calamitous ſeaſon, eſpecially thoſe upon the low fen lands, wet clay and heath ſoils, where their crops were not only deficient, but the grain of a bad quality. It is not to be ſuppoſed, but that the large farmer has had his ſhare of the general calamity; yet from his extenſive capital, he has been able to remedy the evil, by gaining in one way, what he loſt in another; which was not the caſe with the ſmall farmer, with whom all was loſs.

Pariſh rates have become alarmingly high, partly from the dearneſs of proviſions, and alſo from the increaſing habits of luxury and extravagance among all ranks. This is alone what will bring ruin upon this happy and fertile land. Pity that luxury could not be checked before it has taken too deep a root; and that the primeval plain honeſt induſtry of our anceſtors could not again be introduced. This, combined with their good morals, would lay ſuch a foundation of real national wealth and proſperity, as would baffle all the attempts of our moſt inveterate enemies to undermine.—— *June.* 20.

Extract of a Letter from Ripon (Yorkſhire), dated June 29.

'You may be aſſured of every exertion in my power being uſed, to promote the laudable undertaking in which you are engaged. I now tranſmit a ſhort account of our crops and markets. The wheats in this neighbourhood are in general very unpromiſing, and ſpring crops very backward it their growth. Hay appears to be a good crop, and ſome of it is already cut down. The paſtures are alſo good upon the whole. We are buſy with our turnip ſeed, which is here moſtly done according to the drill ſyſtem, though not the common way in this county.

Our market this day is as follows:

Wheat, 16s. 17s. and 17s. 6d. per buſhel.
Maſlin, 13s. and 14s.
Beans, 11s. 6d. 12s. and 13s.
Oats, 8s. and 9s. 6d.

Our buſhel is a trifle larger than Wincheſter meaſure.

Old potatoes, 6s. per buſhel, and very ſcarce.
Milk cheeſes, 4½d. per lib. avoirdupois.
Butter, 48s. and 49s. per firkin of 56 lib. ditto.
Long wool, 14s. to 16s. 6d. per ſtone of 17 lib.

It is chiefly long wool which is grown in this diſtrict.

Extract of a Letter from a Yorkſhire Farmer, June 25.

'The weather having of late been rather warmer, attended with ſome ſhowers, occaſions our corn fields to aſſume a better appearance; and, where the plants are thick enough, a fair crop may be expected. Hay upon good land, tolerable; but, upon ſoils of inferior quality, very indifferent. Paſtures, upon the whole, but middling. Lean beaſts and ſheep ſelling pretty well. Fat ſtock has rather declined in Price; but I don't apprehend the fall will be conſiderable. Owing to a dulneſs of trade, and to a want of foreign remittances, wool has not advanced ſo much as expected. Have only got 6d. per ſtone for mine above laſt year's prices, being 13s. per ſtone of 15 lib.: my ſheep are of the new Leiceſter breed. Some have ſold at 14s. and 15s.; but theſe are not general prices for long wool. Short wool from 9s. to 20s. The firſt, of the coarſe Scottiſh kind, the others from ſheep bred on our moors and commons.

Our markets at Wakefield and Pontefract, for the following articles. are:

Wheat, 45s. to 50s. per load of 3 buſhels.
Beans, 35s. to 36s.
Oats, 55s. to 63s per quarter.
Barley, ſcarce any of it fit for human uſe, and little elſe to ſell.
Turnip ſeed, 2s. to 2s. 6d. per lib.; very ſcarce, a great quantity being ſown this ſeaſon.
Rape duſt, 28s. per quarter.
Beef, 8d. to 10d. per lib.
Lamb and mutton 8d.
Veal, 7d.
Fine long wool, from 12s. to 15s. per ſtone of 15lib.
Fine ſhort, 15s. to 20s.
Coarſe, 9s. and upwards as in quality.

Norfolk.

Norfolk Quarterly Report.

The backwardneſs of the laſt harveſt retarded the wheat ſeed, and the unfavourableneſs of the after weather prevented the cultivation given from being equally good as in better ſeaſons. Some wheats were therefore delayed till the Spring months, which is never reckoned ſo good, either in quantity or quality, as thoſe ſown in Autumn. The cultivation of the Spring crops was, however, as good as in the average of ſeaſons, and the extent ſown is nearly the ſame as uſual; our mode of cropping preventing any material deviation. Both drilling and dibbling are certainly increaſing in practice, being found highly beneficial.

A much greater quantity of potatoes are planted this year than common; and many farmers are forward in their turnip ſeed; ſome have a half, others a third ſown. The drill ſyſtem is not much followed, though it has been found to anſwer well, where properly conducted.

The appearance of the growing crops, as in all years, is extremely various, owing to a multitude of cauſes. The wheats are much mended in thoſe places where they lately looked worſt, and a very conſiderable part are as fine as in any ſeaſon. Peas look remarkably fine, and bloom well. The barley and oats are alſo good, promiſing to make an abundant return; and, in forwardneſs, are much the ſame as in the beſt of years. I underſtand the grub has done much damage in ſome parts of the county, more than uſually happens.

Graſs of all kinds is a great crop, and hay harveſt is now generally in hand. Some fields are ready for the ſtack; as yet, no price is fixed. Our markets for beef and mutton are very bare; the former ſells at the enormous price of 10s. and 10s. 6d. per ſtone of 14 lb; the latter at 8d. per lb., and none really fat to be met with. The lambing ſeaſon proved remarkably favourable; ſeldom equalled, and never exceeded, in this diſtrict.

At our market yeſterday, the little wheat that appeared experienced a further riſe of 2s. or 3s. per quarter; the millers were the only purchaſers. Barley, oats, and peas, are exceeding ſcarce, and fully maintain their prices. Fine wheat, 134s., runs 116s.: Fine barley, 72s.; ſeconds, 60s.; oats 52s. to 56s.; beans 74s. to 76s. per quarter of 8 Wincheſter buſhels.

An Agricultural Society has lately been eſtabliſhed at Lynn, whereof Thomas William Coke Eſq. is choſen Preſident, and the Earls Cholmondely, Spencer, Montrath, Clermont; Lords Walpole, Petre, Wodehouſe; Sir Richard Bedingfield, Sir Henry Lambert, and Sir Martin B. Folkes Bart. Vice-Preſidents. The

purpoſes of the Inſtitution are, the collecting of uſeful information, tending to the acquiſition of a more perfect knowledge in agriculture; breeding of every kind of ſtock, grazing and planting; and, for attaining theſe objects, premiums are to be offered.

Two general meetings of the Society are to be held annually, viz. at Swaffham, on the day preceding Thetford wool fair; and the other at Lynn, on the Wedneſday neareſt the 20th of February.

Yorkſhire Quarterly Report.

The crops of wheat, in general, are more improved in their appearance than was expected by many. The ſtraw promiſes to be ſtrong on the ground; and, if the ears correſpond with it, this grain may yet have a fair average produce, notwithſtanding the thinneſs of moſt of the crops, and the utterly defective ſtate of many of them. Barley and oats appear a full crop in many inſtances. The beans, peaſe, and vetches, have reaped all the advantage from the late ſhowery weather, ſo favourable to theſe articles, that could be reaſonably expected from the bad and unpromiſing ſtate of the ſeed; yet many of them plant very thin, and ſcarcely any can be abundant. During the laſt two weeks, the mowers and haymakers have been buſy with the graſs, of which a part has been already hayed and ſtacked in different parts of the county. The produce appears abundant on the dry and well-manured ſoils; on the ſtrong and cold ſoils, by no means ſo. Clover is late in flowering, but generally a full crop; very little is cut at preſent. Potatoes look uncommonly well; are nearly, if not perfectly, free from the curl, and bid fair for a good ſupply of that uſeful root, at a time when every article of human ſubſiſtence will, in all probability, be peculiarly wanted. Flax, on dry ſoils, is promiſing, but has ſuffered much from worms, &c. on the ſtiffer ones. Of rape, there is a proſpect of an average produce. Yams, clover, and other ſeeds, plant thick and well.

Fallows.——From the cloudy and heavy ſtate of the weather, of late, the turnip fallows, on ſoils not of the drieſt quality, are in a backward condition. Some of the beſt lands are however ſown; but much remains to be done on the generality of them, before they can be in proper tilth: the preſent fine weather will aſſiſt the cultivators to finiſh this work in a very ſhort time. The Summer fallows are, of courſe, in no great degree of forwardneſs.

Prices of Grain——The beſt ſamples of wheat command high and advancing prices, 18s. 6d.; barley at 8s. 6d.; and oats 7s. 6d. per buſhel of Wincheſter.

Butcher-

Butcher-meat.——The beſt beef from 9d. to 1s.; mutton 8d.; and veal 7d. per lb. of 16 ounces.

Cattle and Sheep ——Both fat and lean are at high prices, particularly the fat; perhaps no very conſiderable reduction of the price of theſe may take place ſoon, notwithſtanding its preſent exorbitance.

Horſes.——Good ones, both for the ſaddle and draught, are ſcarce and dear.

June 7.

Extract of a Letter from Stafford, June 25.

"I have been in London for a month paſt, and, on my return, had the ſatisfaction of obſerving that the crops in the midland counties promiſe to yield great abundance. On Monday, my hay-harveſt commenced, which will yield me a greater crop than I have got four years paſt. The weather is good at this time; and, if it continues, we ſhall ſoon get it into the ſtack. Wheat, barley, and oats, have all a fine appearance; and the tares, which I had from London at 20s. per buſhel, beſides carriage, promiſe to be a moſt luxuriant crop. We are now buſy with our turnip-ſowing; but ſeed is exceedingly ſcarce, and at an extravagant price. I paid 2s. per lb. for it, and uſed, in former years, to have it for 8d. and 10d. I have made every inquiry reſpecting the ſtate of our markets. On Saturday, prices were, for wheat 20s. to 22s.; barley 9s. to 10s. 6d.; oats 9s. to 9s. 6d.; beans 13s. to 14s. per buſhel of 38 quarts; beef 7d.; lamb 6½d.; mutton 7d.; veal 5½d. per lb. of 16 ounces. I have finiſhed the ſhearing of my ſheep and lambs, and have been very ſucceſsful in the latter this ſeaſon, having only loſt two out of all my ſtock, which is of the large Leiceſter ſort. The wool is coarſe: I have been offered 25s. per tod of 30 lb., and 10d. per lb. for lambs wool; but, as higher prices are expected, have not ſold. Next Saturday is our fair, when I ſhall be better able to inform you of the price of every article, though I doubt it will be too late for your next Number.

During the time I was in London, I viſited Mr Adam's farm at Streatham, which is well worth the attention of every farmer. He has one of Mr Meikle's thraſhing-machines, and ſeveral other curious inſtruments for agricultural operations. I likewiſe ſaw a number of new invented huſbandry inſtruments, at M'Dougal's in Oxford Road, with which I was highly gratified."

Extract of a Letter from London, June 30.

"I have not yet been ſucceſsful in opening a correſpondence for you in the ſouthern counties of Hants, Suſſex, &c. but have the promiſe of reports for your next number. The wheat crops in Middleſex look but very indifferent; moſt of the ſoil being

a ſtrong clay; the continued cold weather injured it much; in many places, there will not be half a crop. The field that you ſaw laſt Summer in fallow, near Moor Park, is ſo very bad and thin, that beans have been planted upon a great part of it, to make up the crop; the other half of the field is this year under Summer-fallow, and in as bad order as what you ſaw laſt year. The beans and peas, in general, promiſe to be an abundant crop, and the few oats ſown are good: little or no barley is grown in this county. In Hertfordſhire, the wheats, upon the whole, appear to be good, and are much more forward than in Middleſex, being now all ſhot and in bloom; while many of the Middleſex fields have the ear ſtill locked up in the blade. In Surry, the wheats are good; the oats and barley alſo look well; and ſeveral fields of rye are ſo forward, that if the preſent fine weather continues, we will not be long in having new grain at market. The huſbandry round the metropolis, is much in the ſame ſtate as uſual at this time of the year. In Middleſex, which I have had more opportunities of examining than the other counties, the fallows are badly managed; they don't appear to have been croſs-ploughed, and are ſo full of couch, that the furrows are as green as a corn crop in the month of March. For three months paſt, our markets have been advancing, notwithſtanding the large importation of foreign grain; of late, the quantity of fine Engliſh wheat at market being ſmall, and the quality of the foreign being ſo indifferent, that but a ſmall proportion of it can be mixed with the other in grinding, has occaſioned fine ſamples to advance conſiderably. Good oats, from the ſame cauſe, are likewiſe advanced; while ordinary qualities, both of wheat and oats, have a very dull ſale.

From the great demand from the north for the laſt two months, the prices of barley, hog peas and beans, have riſen conſiderably. Smithfield market has been well ſupplied for the laſt three months; but, owing to the great demand for the navy, &c. prices at times have been very high. Vegetables of every kind have been ſold in Covent Garden market for ſix weeks paſt; and, with green peas and other vegetables, are now in abundance; as are alſo ſtrawberries, cherries, and currants. The hay crop round London is very good, and, having a fortnight of fine weather, a great part is got ſtacked in excellent condition. The look of the hop vines in Kent, at preſent, is unfavourable. The duty is only eſtimated at 90,000l., which, ſome time ago, was thought might reach from 150,000l. to 200,000l.; but if the fine weather continue, the crop may be conſiderably better than what appearances indicate.

State

State of the ſeveral Markets this day.

MARKLANE.

Foreign wheat, 100s. to 130s.
Engliſh ditto, 120s. to 153s.
Oats, 44s. to 58s.
Stained barley, 46s. to 56s.
Kiln-dried ditto, 50s. to 60s.
Fine malting ditto, 60s. to 73s.
Malt, 57s. to 80s.
Hog peas (laſt week), 90s. to 100s.
Tick beans, 66s. to 76s.
Small ditto, 80s. to 86s.
—all per quarter of 8 buſhels Wincheſter.
Flour, 5l. 10s. per ſack of 280 lib.
Bread, 18¼d. per quartern loaf.
New potatoes, 15s. per cwt. retailed at 2d. and 2½d. per lib.

SMITHFIELD.

Beef, 5s. to 6s. Lamb, 5s. 6d. to 7s.
Mutton, 5s. to 6s. Veal, 4s. to 4s. 6d.
Pork, 5s. to 6s. 8d. by the carcaſe.
Retailed Prices, per pound of 16 ounces.
Beef, 8½d. to 10d. Mutton, 8d. to 9d.
Lamb, 10d. to 1s. Veal, 9d. to 10d.

ST JAMES'S HAY MARKET.

New hay, 4l. 10s. to 6l. per load.
Old ditto, 4l. 10s. to 7l. 10s.
Clover ditto, 7l. 7s. to 7l. 10s.
Straw, 2l. 14s. to 3l. 3s.

Sheep ſkins, 3s. 4d. to 6s. 6d.; lamb ditto, 2s. 6d. to 3s. 2d.; ſhearlings, 1s.: clover ſeed, 24s. to 90s. per cwt.; white ditto, 40s. to 100s.; trefoil, 34s. to 56s.; rye graſs, 16s. to 24s. per quarter; turnip ſeed, 40s. per buſhel; rape ſeed, 46l. to 52l. per laſt; raw hides, 2s. to 3s. per ſtone of 8 lib.; market ſkins, 10s. 6d. each; horſe hides, 15s. to 16s. each; tallow, 3s. 8d. per ſtone of 8 lib.; hops, Farnham, 12l. 16s. to 14l.; Kent, 10l. 14s. to 13l.; Eſſex, 10l. to 15l. 10s.; Suſſex, 10l. 18s. to 15l.

The

The average Price of Corn, by the laſt returns, is

England.		*Scotland.*	
Wheat,	126s. 1d.	Wheat,	94s. 2d.
Barley,	66s. 8d.	Barley,	57s. 7d.
Oats,	48s. 7d.	Oats,	48s. 9d.
Rye,	88s. 7d.	Rye,	55s. 9d.
Beans,	76s. 8d.	Beans,	83s. 6d.
Peas,	79s. 8d.	Peas,	87s. 1d.
Big,	56s. 6d.	Big,	49s. 4d.

All per quarter, Wincheſter.

Oat-meal, per ſack of 280 lib. -	83s. 7d.	Oat-meal per boll -	43s. 8d.

There were imported, laſt week, into London, 2000 cwt. of bacon, 51 tons of beef, 1500 cwt. butter, 1000 cwt. cheeſe, 700 lb. of hops, 1266 quarters of oats, 3188 quarters of wheat, 1984 lb. Spaniſh wool, 1650 cwt. rice, and 300 tons of pork.

Extract of a Letter from a Farmer in Wales, dated June 26.

" I was happy to receive a copy of the Farmer's Magazine, and ſhall be proud if any information, in my power to communicate, contributes to promote ſuch an uſeful publication. Something of the kind is much wanted in this part of the kingdom, for we are far behind in point of improvement; and I know of no plan better calculated to ſpur on our farmers, than to let them ſee what is done by their brethren in other quarters.

We have here a great number of ſmall farms, rented from 20l. to 60l. a year, on which are kept from four to ten cows: and perhaps not more than ten acres of the drieſt ſpots are ploughed, yielding little more grain in a good year than is neceſſary for the ſupport of the farmer's family. At preſent, there is not one in five of the farmers of that deſcription, but what is under the neceſſity of purchaſing corn, and even many of a higher claſs are in the ſame ſituation. We have a few farmers who rent from 100l. to 500l. of land; but, in general, we don't like the plough, the expence being ſo great as to eat up all the profit; and, unleſs we can be brought to change our preſent cuſtoms altogether, it will never be otherwiſe. Our ploughing is chiefly performed with oxen; and the farmer who attempts ſending his team into the field with leſs than ſix of theſe animals, may lay his account with being the *talk* of the country. It is common to ſee eight large oxen in one plough, ſtirring the barley land; ſo that the very beſt land on the farm is employed in raiſing hay and paſture graſs, for the ſupport of the working ſtock. There are more horſes uſed of late than formerly,

merly, but four is the number uſually yoked. Two horſes in a plough was never heard of here till I came to this country; though, I think, under proper management, oxen might be employed with advantage; and I ſhall give reaſons in ſupport of this opinion, in a future communication.

A good deal of the land here is pared and burned, which is found to do well upon the old meadows. We don't pay much attention to dung, except when required for the turnip fields, which have of late greatly increaſed. Our chief manure is lime, with which this country abounds; the quality various. The general method is, to lime every fifth year; and the common rotation upon the dry land is, fallow, wheat, barley, clover, and wheat. This year, wheat after clover is looking better than after fallow, though the crop is in general very thin, and nothing like to what it was laſt year at this time: the late dry weather has been in its favour, and it looks tolerably healthy. Some fields are beginning to ſhow the ear. The dry gravels have the beſt appearance, as the wetneſs of April and May was beneficial to land of that deſcription; but the clays have ſuffered much, and, to all appearance, will not produce half a crop; the late ſowing, and the bad ſeed uſed, being much againſt it. Our markets are high for every article. Wheat is 48s. and 50s. per buſhel of 20 gallons (27 buſhels Wincheſter); barley 30s.; oats not to be got, oat meal ſells at 1s. per quart. but there is little uſed in this part of the country. Potatoes are very dear, both old and new; the latter ſold in Cardiff-market, on Saturday, at 6d. per lib.; beef from 6d. to 9d.; mutton 8½d.; veal 6d.; lamb 6d.; dry bacon 14d.; butter from 10d. to 1s.; cheeſe of new milk 8d.: ditto of ewe milk 9d.; ditto of ſkimmed milk 6d.; all per pound of 16 ounces; hay 6l. per ton; ſtraw equally high in proportion. The crop of hay ſeems a middling one this year. The clover and rye-graſs harveſt is moſtly finiſhed, and we will ſoon begin to cut the meadows, which are generally ſufficient work till the corn harveſt arrives."

Northumberland Quarterly Report.

The crops upon dry ſoils are, in general, looking well; but upon clays,—ſtrong loams,—wet, and cold-bottomed lands, the appearance is very unpromiſing: a great failure has been occaſioned, on ſuch ſoils, by the deſtructive effects of the *Beetle Grub* *, particularly in the wheat and oats ſown upon clover leas. Many fields

* This Grub is from 1 inch to 1½ inch, long of a browniſh grey colour. Some of them were put in a box with earth, and regularly fed, but have not yet made any change; others have been opened, and the embryo of the Black Beetle taken out of them.

fields have been ſo completely eaten off, that they have been ploughed up again for fallow; ſome were ſown with barley, which has alſo been very much injured, and, in many places, entirely deſtroyed. The loſs, I am afraid, is much more extenſive than is at preſent imagined. A good deal will depend upon favourable weather, and a fine harveſt; but, from preſent appearances, the crop, upon ſuch ſoils, cannot be eſtimated at more than half of the uſual average; and the harveſt will not be early.

Turnips, ſown the beginning of June, are looking very healthy; what have been ſown the latter end of the month, and in July, want rain, to bring them forward, particularly upon adheſive ſoils, which were ſo ſaturated with wet laſt year, that they have wrought very unkindly for turnip fallow, and could not be brought to that mellow pulverized ſtate, ſo neceſſary for the vegetation of ſmall ſeeds.

Potatoes are looking well, and appear to have little of the curl.

Paſtures have been very bad, and hay is expected to be a light crop, unleſs favourable rains come very ſoon.

The young clovers, in many places, have been much injured by the ſmall grey ſnail.

The markets for fat ſtock were at their height about the middle of May, when beef was from 12s. to 13s. per ſtone, ſinking the offal; and mutton 9d. per lib.; but have been coming down ever ſince. The prices of beef are now from 7s. to 10s. per ſtone, according to fatneſs, and mutton 7d. to 8d. per lib.

The wool-growers expected a conſiderable advance on laſt year's prices; but the buyers do not ſeem willing to give more, that is, 9d. to 10d. per lib. for long wool, and 1s. 1d. to 1s. 3d. for ſhort wool. The fleeces take off very light; and the crop of wool in reſpect to weight, is thought to be conſiderably under the average.

The corn makets have kept advancing. The preſent prices are,

Wheat,	14s. 6d.	per Wincheſter buſhel.
Barley,	8s. 4d.	ditto.
Oats,	7s. 6d.	ditto.
Peas,	14s. 4d.	ditto.

Extract of a Letter from Newcaſtle, July 2.

"Our crops here, and in the neighbourhood, are far from being ſo promiſing as in the ſouthern counties. The oat crop, in particular, looks ill; and, in many parts, the firſt ſowing was ploughed down, and freſh ſeed ſown. Our prices are, Conningſberg wheat, 120s. per quarter; rye, 80s. to 86s.; barley, 60s. to 63s.; oats 56s. to 80s., peas and beans, hardly any at market."

Poſtſcript

Postscript to Scots Intelligence.

NORTHERN REPORT.

Regarding the preſent ſtate of our crops, I am ſorry to ſay that nothing very favourable can be mentioned. Not more than half the uſual quantity of wheat was ſown; or, in other words, what with the difficulty which attended the ſowing, and what has been ploughed down, not half the uſual quantity remains; and we cannot promiſe half of an average crop from its produce. Barley and oats look tolerably well, and are greatly improved by the late rains, which were much wanted before we received them. Some of the barley is in the ear. Peas, in general, are very indifferent. Hay harveſt is begun, but the crop is light. The Summer has hitherto been cold and ungenial. Some demand has lately been for cattle, which have ſold at pretty high prices. Beef and mutton ſell at 6d. per lb.; oat meal from 40s. to. 50s. per boll of 9 ſtones Dutch; bear meal from 32s. to 40s. per boll of 10 ſtones, oats 40s. to 50s. per boll of 5 firlots; barley, per boll of 4 firlots 40s. to 48s. I believe little wheat and peas have been ſold for theſe three months paſt. The late rain was very ſeaſonable for the turnip crop, which will now in all probability turn out a good crop. I heard of few complaints in this quarter from the ſlug or worm, that has been ſo much noticed in other parts. I truſt it will be in my power ſhortly to ſend ſome important information reſpecting the ſheep huſbandry of the northern counties, which I expect from a gentleman who has extenſive concerns in that line, and is well qualified for communicating ſuch information.

July 5.

Haddington, July 11.—Our wheat market was rather dull, and prices were lower this day than laſt. Higheſt prices 63s. 6d.; but only ſix bolls ſold at that rate. Current prices were from 55s. to 58s. Oats much as formerly; higheſt 50s.; but the quantity was not great. Barley advanced 2s.; and likewiſe peas and beans.

Obituary.

April 3. At London, William Hall, Eſq. of Whitehall, pariſh of Chirnſide, county of Berwick.

A correſpondent in Berwickſhire, to whom we applied for information reſpecting Mr Hall's agricultural operations, ſays, "Before my arrival in this county, Mr Hall was become very old, and in a great meaſure incapable of attending to agricultural affairs. I have been told, and I believe with truth, that his purſuits in that line were extremely injurious to his fortune; and that he farmed away a great part of a fine eſtate. I ſhould rather hold him up as a terror to gentlemen againſt becoming farmers, than as an example for their imitation—I mean in farming. Some very good hedge management was practiſed on his eſtate, but by no means regularly followed out. I have ſeen the ſame, a kind of baſket-work pluſhing in England. He had tolerable notions about lining out roads, but was almoſt always oppoſed by the other gentry; ſo that his ideas, if good, were ſeldom, if ever, carried into execution."

Mr David Cooper, farmer at Clarey, county of Wigton, much regreted.

Peter Dudgeon, Eſq. of Eaſt Craig, farmer at Byres, county of Eaſt Lothian, an extenſive and ſkilful grazier.

The following particulars concerning this gentleman, are extracted from the 2d volume of Wight's "*Present State of Husbandry in Scotland*," publiſhed in 1778.

"Peter Dudgeon, tenant at Byres, has a great character in that country, for ſkill both in corn and graſs. I would be reproached by our bretheren, if ſo eminent a cultivator and grazier were not particularly taken notice of. He rents 1000 acres from the Earl of Hopetoun, and about 800 from others, by his own account, for which he pays about 1600l. Sterling of rent. Mr Dudgeon is held to be the beſt grazier in this county. He has commonly 1400 acres under graſs, and knows how to improve his ſtock as well as his land. His chief rule is that of ſtocking lighly, to afford at all ſeaſons plenty of food. And, by the thriving of the ſtock, the land is alſo improved."

At Newton, near Barniſtone, Yorkſhire, aged 90, Mr Francis Ellerton, an eminent farmer. He was carried to his grave by eight grandſons, and attended by twenty nephews.

At Barran upon Trent, Derbyſhire, Mr Joſeph Sharpe, farmer; who fell into a ditch in his own grounds, and was drowned.

At Adney, near Newport, Shropſhire, aged 83, Mr Leverſage, a very reſpectable farmer.

At Broughton, Northamptonſhire, Mr John Waters ſenior, an eminent ſaleſman, and dealer in cattle.

At Lenham, Kent, aged 77, Mr Robert Mercer, a wealthy and reſpectable farmer.

THE

FARMER's MAGAZINE:

MONDAY, 20. OCTOBER 1800.

(N° IV.)

PART I.

ORIGINAL COMMUNICATIONS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Letter concerning the Management of a Late Crop of Oats.

GENTLEMEN,

INVITED by the introduction to your Firſt Number, I beg leave to offer to your conſideration ſome obſervations and experiments, made in the management of a late crop of oats, during the laſt unfavourable harveſt, which may perhaps be of uſe to ſome of your readers, under ſimilar circumſtances.

Having been induced to break up about eighty acres of a ſheep-paſture, in a pretty high ſituation, conſiſting of a light dry ſoil, upon a whin-ſtone gravel, that was very much overrun with fog, I had the whole of it ploughed laſt Spring by the middle of February; but as none of it had ever been in tillage, I was afraid to riſk a crop of early oats, and unfortunately determined to ſow the whole with common oats, which I began to do during the laſt week of February. I had got a few bolls ſown in very good order, and another break half harrowed, when a fall of ſnow, with a pretty ſevere froſt, ſet in, which continued betwixt a fortnight and three weeks. Upon a change of weather, I found ſuch part of the ſeed as had been covered with ſnow ſo far advanced in vegetation, that I allowed it to remain in that ſtate, rather than diſturb it with additional harrowing. The whole was completed early in April; and, when the braird made its appearance, I was agreeably diſappointed, to find no apparent difference on what had been expoſed to the ſeverity of the weather, from the

other parts of the field; and this I mention as a proof that there is no danger, upon a dry foil, in fowing oats much earlier than is generally practiſed.

The cold barren Spring gave the whole ſo unfavourable an appearance, that, by the middle of June, it ſcarcely covered the clod, and I deſpaired of ever reaping a crop; but, during the month of July, which was the only favourable weather we experienced in 1799, the vegetation was ſo rapid, and the whole became ſo luxuriant, that I laid my account with at leaſt ſix or eight bolls per acre. But when the rains in Auguſt ſet in, the whole field ſtill continued to vegetate, and became ſo ſtrong in the ſtraw, that the greater part of the crop lodged, without coming to maturity. As the weather continued very unfavourable, I delayed cutting it till the middle of October; by which time, it was ſo much *edge-grown*, or full of after-ſhoots, that it muſt ſoon have rotted on the ground; and I then determined to cut it, without any regard to the weather.

Such part of it as could be cut dry, was ſtooked in the ordinary manner; but the greateſt part of it was *gated or ſet up in ſingle ſheaves*, a method which I take for granted is known to every farmer.

It continued a long time upon the ground, in hopes of more favourable weather, and people were conſtantly employed in ſetting up the ſtooks or gates as they were blown down; but from the dews or hoar-froſt during the long nights, and the little influence of the ſun during the day, I found it was not getting any drier, and reſolved to have it off the ground at any rate. Such part of the crop as had been in ſtooks, was put into ſmall ſtacks, with chimneys for a draught of air in the middle of them. The gates that were tolerably dry, were bound into ſheaves, and ſtacked in the ſame manner; part of them were alſo bound, and built in *rive ricks*, or ſmall ſtacks, about four feet diameter, and ſeven or eight feet high, with a ſingle ſheaf, with the head downwards, ſpread over the top of it. Such of the gates as were in the wetteſt ſtate, were put up in the ſame manner, without being bound into ſheaves; and the whole remained in this ſtate till thraſhed out during the Winter.

When the crop came to be taken in, I found, that what had been put in ſtacks, either from ſtooks or gates, was very much heated, and part of it rotten upon the weſt ſide, which had been leaſt expoſed to the wind, although ſome of the ſtacks had been once or twice caſt. The rive ricks, built of the

the gates that had been bound, were not heated, but muſty and moulded in the heart; but thoſe that had been made of the looſe or unbound gates, continued in the ſame, or were rather in a drier ſtate than when put up; and I am confident, that, if the whole crop had been managed in this laſt manner, immediately or ſoon after being cut, a great deal of trouble and expence would have been ſaved, and a much leſs quantity of grain loſt, by being ſo long and often toſſed about in the field.

One great inconveniency attending theſe *rive ricks* is, their being ſo liable to be blown over by the wind; and I am of opinion, that a preferable practice would be, to ridge up a piece of dry ground with the plough, in a direction from ſouth to north, in the form of a high turnip-drill, and to place the gates upon it in rows, with their heads overloping one another, and as high as a man on each ſide, ſtanding upon the ground, could eaſily build them, and then cover them with a row of ſheafs, ſloping a little from the centre to each end; and, to prevent them from being blown over, a few ſtakes or props may be placed at proper diſtances, on each ſide of the rows: this, I am perſuaded, is the beſt poſſible method of preſerving a late crop in ſuch a wet and unfavourable ſeaſon as the laſt; but, not having made the experiment, I only ſtate this as matter of opinion.

It may not be unſatisfactory to mention, that the ſtraw produced from the above crop, although wet, and part of it much heated, had ſuch a quantity of green corn in it, that it was eaten greedily by a ſtock of Highland cattle, and kept them in better condition than they uſually are upon dry ſtraw. The corn was ſo wet and light, that I conſidered it not worth grinding: I therefore converted a lime into a corn kiln, on which it was dried, dighted, and then laid up for my work-horſes; and by which, without any other corn, they were kept, through the ſeaſon, in perfect good order.

I am, &c.

A Farmer.

June 1800.

P. S.—Since writing the above, part of the ſtubble of the field had been accidentally ſet on fire; and when burnt, I diſcovered a very conſiderable quantity of corn, equal at leaſt to two ſeeds, ſcattered upon the ground; a proof how much had been loſt by the above management.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the preſent State and Management of Common Fields and Waſte Lands in Yorkſhire.

GENTLEMEN,

THE preſent ſtate and management of theſe lands, are little favourable to an improved and liberal plan of cultivation. The open fields are held by ſo many owners, and in ſuch ſmall patches, ſcattered over an extenſive tract, at great diſtances from each other, that their cultivation is rendered extremely troubleſome and expenſive; added to the inſuperable obſtacle to an improved rotation of crops, by the diſcordant humours of ſo many holders, who can ſcarcely ever be brought to agree with their neighbours, upon any uniform plan of management.

The waſte or common lands in this county, are in a deplorable and moſt diſgraceful ſtate; management is a perfect nonentity here; nine parts in ten of them are covered with ruſhes, furze, fern, moſs, &c.; and even where good herbage exiſts, it is for the real advantage of none, but the prey of all. Where there is a ſtint or limitation of paſture, according to the reſpective claims, the caſe is ſomewhat better; there are even a few ſolitary inſtances of tolerably uſeful common paſtures; on which, with proper care, every improvement of the herbage might be made, ſhort of cultivation by the plough.

Of the open fields, ſome, on the drier or turnip ſoils, are cultivated, in the regular courſe of, 1. Turnips, eaten on the ground by ſheep. 2. Barley. 3. Clover, or Beans. 4. Wheat. Theſe inſtances of the good ſenſe and good humour of the occupants, concurring ſo obviouſly for their own benefit, in a rational ſyſtem of management of theſe fields, are very rare. Hence, the good farmer, having the misfortune of holding lands ſo ſituated, has, at times, the mortification of finding his valuable crops of turnips, &c. liable to the depredations of cattle, from the ſupineneſs of thoſe who will perhaps have a Summer-fallow in the ſame field; and who, of courſe, do not feel themſelves intereſted in repairing the fences for that year. Hence, the motley ſtripes of turnips, fallow, beans, clover, wheat, barley, and oats, at once in the ſame field, garniſhed with a variety and profuſion of field-flowers and noxious weeds, to the manifeſt injury of the whole body

body of occupiers, while no mode exiſts of compelling the few refractory ones to an improved ſtyle of management and culture. In ſhort, the condition of theſe fields is ſuch, on ſome of the beſt turnip-ſoils in the iſland, that no intelligent cultivator would give half the rent for them, that he would for the ſame land, if incloſed, or managed under a different ſyſtem. Every one is convinced of the neceſſity of ſome remedy; but, whether it would be expedient to *compel* the incloſure of the fields, along with that of the commons, in all future incloſure-bills, the writer is not competent to decide.

There is in this county, an inſtance or two, where, the townſhip containing four open fields of the ſame ſort of ſoil, the rotations are regular, and of courſe exhibit a noble pattern of cultivation on an extenſive ſcale; for, in theſe inſtances, a moſt ſingular ſpirit of emulation is excited, which almoſt inſures complete management throughout the whole; as the miſmanagement of a ſingle field never fails to call up the ſatire and ſneer of the neighbours, at the expence of the poor ſlovenly holder. There is a much-admired inſtance of this laudable method of cultivating open fields, with this ſo pleaſing harmony of management, at *Wath upon Derne*, four miles north of Rotherham, which deſerves a record, to the credit of the place; and better grain is no where grown. At *Hatfield*, ſeven miles eaſt of Doncaſter, may be ſeen the direct reverſe of the picture, on a gravelly ſoil, equally well adapted to the turnip-huſbandry, and where even the turnip-hoe appears almoſt unknown.

On the ſtrong, or clay ſoils, the management of the fields is generally more uniform, perhaps of neceſſity; the barren, or Summer-fallow, occurring every four years, renders unanimity indiſpenſable, even to the moſt ſtupid of the poſſeſſors. The moſt approved courſe of crops is, 1. Wheat, after fallow. 2. Beans, or Clover. 3. Wheat. Many other, and perhaps worſe rotations, obtain in different places; and as it frequently happens, that a farmer of twenty acres has them ſcattered about in thirty or forty different and diſtant places, it may eaſily be conceived how troubleſome and expenſive their cultivation muſt be. The great utility, nay, neceſſity, of incloſing theſe open tracts of land, muſt be obvious to every one the leaſt converſant in rural affairs: for, while they are in their preſent ſtate, the open-field lands in this county, amounting to not leſs than a million of acres, as well as thoſe throughout the iſland, are certainly much leſs productive than they would be under an improved mode of culture, ever conſequent on an incloſure. I

do not here mean to exclude the exceptions which may be found; exceptions which, in ſome degree, really ſpeak in favour of open fields when properly managed, as, in ſome ſuch ſituations, grain of moſt excellent quality is raiſed. But, as the general ſtate of them is very little adapted to good huſbandry, and as they cannot have the neceſſary changes of graſs, paſturage, &c. their preſent ſituation ought to be reprobated, and altered as ſoon as poſſible; no other mean occurs than a general incloſure-bill for this ſalutary purpoſe: To this meaſure, no objection can be oppoſed in ſound policy; and it is really aſtoniſhing it has not been reſorted to long ſince.

The waſte lands of this county, and indeed of the iſland at large, are in a ſtate moſt diſgraceful to its policy; they are poſitive nuiſances to every improvement around them. Their ſurface is covered with ſuch wretched traſh, ſo much occupied by bog and marſh, and in fact with every thing but the uſeful, that the poor animals, which are turned out upon them to ſhift for themſelves, become, for want of food, ſuch depredators on the adjoining fields and incloſures, as no fence of common height and ſtrength can oppoſe. The loſs to the community, by this wretched mode of rearing a few ſtarvelings of cattle and ſheep, is incalculable; and that on the very ground, which, by culture, would ſupport above double the number, beſides abundant crops of grain, for which it would ſoon be in the very beſt and moſt fertile ſtate.

The whole amount of theſe waſte lands in Yorkſhire, is calculated at 849,272 acres; of which, about 500,000 are capable of cultivation; the remainder ſuppoſed to be incapable of any improvement, except by planting. The above 500,000 acres, on a moderate calculation, might be made to produce at leaſt 1,000,000 quarters of grain, of the various ſorts, at the ſame time with a much improved ſtock of cattle and ſheep, giving the beſt employment to numbers of hands, who are now compelled to reſort to peſtiferous manufactures, or to remain idle half their time. Theſe commons are, for the moſt part, paſtured by the cattle of the inhabitants *ad libitum*; ſome few are more regularly and moderately ſtocked, by what is called a ſtint or limitation to each landholder, according to a certain rate: and, in theſe caſes, the paſture is ſometimes a tolerably good one; but they are ſo rare, that they can never form an argument againſt the neceſſity of the general improvement of the waſtes; for even theſe ſtinted paſtures are in a ſad condition, compared with what they might be brought to by the plough.

Immenſe

Immenſe tracts of theſe lands are now loſt, for want of draining; lands of the moſt valuable quality, under that improvement. Large and valuable tracts might be gained from the ſea, by embankments, &c. which are utterly neglected in the preſent ſtate of things, to the very great loſs, nay injury, of the community. All theſe circumſtances ſtrongly impel the conſideration, that the leading intereſts of this county could not better employ their attention, than by endeavouring, by all poſſible means, to bring theſe lands into a ſtate of cultivation; eſpecially at a time when the commonelt neceſſaries of life, the growth and produce of the country, are nearly out of the reach of the middling and lower claſſes of the people. It is an awful conſideration, and ought deeply to impreſs the minds of the rulers of any country, that while objects of comparatively trifling importance, perhaps remote or foreign intereſts, engage ſuch anxious and expenſive attention, the real intereſts of home may be neglected.

In regard to the hiſtory of this particular diſtribution of the territory of parithes, it may appear, by the peculiar mode of allocation, to have been introduced with the feudal ſyſtem. Three or four large fields of arable, and one tract of paſture or common, no doubt were the original domains of the lord of the manor, who had the labour on them performed for him by his vaſſals, who had afterwards different allotments or parcels of land, ſcattered over various parts of the lordſhip, granted, probably, for particular or eminent ſervices, or in other ways alienated: as we ſee, in moſt uninclofed townſhips, a number of ſmall inclofures, indeed much too ſmall to be otherwiſe eaſily accounted for. Hence, there is reaſon to believe, that a conſiderable change in the management and occupation of land, was one effect of the feudal inſtitutions, at the time our Norman Conqueror forced them over the head of the much more excellent Saxon laws of our more remote anceſtors: and we cannot but with pain obſerve, that greatly too much of the malignant ſpirit of thoſe inſtitutions remains, checking, if not blaſting, the riſing efforts of improvement, and, in a thouſand inſtances, abſolutely prohibiting the inclofure and ſuperior cultivation of ſuch open and wild diſtricts. Yet, here, let us obſerve, that ſome open fields might not be much improved by inclofing; but, as ſuch fields are in very particular circumſtances, they are by no means to be conſidered but as the

trifling exceptions generally occurring on general rules and obſervations.

Many difficulties would occur to reſpect in the incloſure of theſe fields and waſtes. The intereſts and opinions, generally diſcordant, of the different claimants; the claims, frequently unreaſonable, of the lord of the manor and tithe-holder, added to the certainty of an enormous expence of commiſſioners, ſolicitors, &c. have rendered, in ſome late inſtances, lands incloſed by act of Parliament, as dear as if actually purchaſed in fee-ſimple. Theſe preſent diſcouragements are almoſt inſuperable in the way of theſe moſt important improvements, in too many caſes; ſo that it has actually become a problem, whether it would not be a meaſure of ſound policy, for the government of any country ſo ſituated, to aſſume the power of alienating the waſte lands as public property, for the real benefit of the public, and to ſell them to ſuch as might incline to become purchaſers; reſerving a preference in ſome way to the claimants: But, whether or not ſo, is matter for diſcuſſion; as there is no doubt thoſe who have lands adjoining, would purchaſe the contiguous lots, and the remainder would readily be ſold by public auction. The reſpective claimants, by this mode, at the ſame time that they would render an eſſential ſervice to the finances of their country, would alſo incloſe and gain poſſeſſion of their lands at a much cheaper rate than by the ordinary mode. The great difficulty at preſent is in the finding of the average value, and fair and impartial allocation, in due proportion to the value of claims, which is now ſcarcely ever ſatisfactorily done in any one inſtance; whereas, by the other mode of diſpoſal, nothing farther would be neceſſary, than ſimply to make ſale of the lot next adjoining that laſt ſold. Here, nobody would be wanted but a ſurveyor, and a jury of the neighbourhood, to determine any queſtion that might ariſe from particular circumſtances. Thus might the barren waſtes, now the opprobrium of our national agriculture, be converted into fruitful fields, the joy and glory of an enlightened and ameliorated cultivation.

W. P.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Strictures on Hedge-Management.

GENTLEMEN,

IN ſome late journies through ſeveral Engliſh counties north of London, I have obſerved frequent and ſhameful neglect, in the ſtate and management of the hedges in many places; I may almoſt ſay everywhere. Should the following curſory remarks on the ſubject merit inſertion in your Miſcellany, they are offered as my mite to the treaſury of huſbandry, the moſt uſeful of the arts.

The firſt circumſtance that ſtrikes an obſervant ſtranger, accuſtomed to the regularity of modern incloſure, is, the great inequality in the ſizes of fields, in the anciently incloſed diſtricts of England, the crookedneſs of the hedges, and the ſtrangely irregular ſhapes of the incloſures. But the object which I have particularly in view, in theſe ſtrictures, and which merits the ſevereſt reprehenſion, is, that almoſt everywhere the hedges have been permitted to run wild, overſpreading an irregular breadth of ſurface with a belt of uſeleſs and cumbrous bruſh-wood, while they ſcarcely half fence the fields, which they diſfigure greatly, and the value of which they leſſen very materially.

In very extenſive, old, and incloſed diſtricts, I am fully convinced theſe crooked belts of bruſh-wood, improperly ſtyled hedges, occupy a breadth of not leſs than eighteen or twenty feet, on every ſide of all the fields, one with another. Allowing conſiderably leſs than this ſuppoſition, as the waſte of land beyond what ought to be occupied by a ſtraight-lined and properly dreſſed hedge, and ſuppoſing the old incloſed fields to conſiſt of ten acres each, on the average, which I believe is rather above than below the truth, this loſs of productive ſurface will amount to about half an acre in each field, or five acres in the hundred, upon the whole extent of ſuch incloſed diſtricts. When in paſture, theſe belts produce little or nothing to the cattle in the fields, beſides tearing off a great deal of valuable wool from the ſheep; and, when the fields are in hay, or under aration, they preclude the employment of the ſcythe and plough, from a much larger proportion of the land than has been ſtated above.

The

The waſte or loſs produced by theſe hedges, is ſtill farther and largely enhanced, by giving ſhelter to an immenſe number of ſmall birds and other vermin, which deſtroy conſiderable quantities of the growing crops, eſpecially when in corn. This ſpecies of loſs cannot be appreciated: But as rents are always calculated upon ſome practically known, or eſtimated average produce, it muſt proportionally diminiſh the rents which the lands would otherwiſe yield to the proprietors.

In many places, the originally dividing hedges of two or more fields have been altogether neglected, allowing wide gaps to form in many places, ſo that cattle can paſs freely through them: But theſe hedges are ſtill allowed to remain, ſerving no other purpoſe than to occupy, uſeleſsly, a conſiderable portion of ground, and add to the ſhelter for vermin of all kinds.

Every where, theſe old hedges ſeem to have been originally formed of a great variety of different kinds of plants, beſides the white thorn, taken indiſcriminately; many of which are very ill ſuited to the purpoſe. The conſequence of this, and of neglect in training, has invariably been, to produce a great number of weak places and gaps, which are obliged to be perpetually mended up by various unſightly and expenſive contrivances; ſuch as hurdles, pales, ſtake and adder, and ſo on.

On an eſtate not fifty miles from London, which I had occaſion to examine minutely laſt year, beſides the evils already noticed, I found uniformly a good ridge-breadth left uncultivated, next the hedges, round every field under the plough. In this inſtance, (and my information was, that the practice was univerſal for many miles round), the loſs of productive ſurface was not much leſs than ten *per cent.* of the whole infield fertile land. On that eſtate, I obſerved one ſolitary inſtance, of having recently grubbed up a uſeleſs broad croſs fence, which was then carrying a much heavier crop of hay than the reſt of the field. I had the ſatisfaction to convince the occupying proprietor of that eſtate, of the great waſte of good land, by theſe cumbrous broad belts and uncultivated ridges; and have reaſon to believe, they are all now in courſe of being extirpated, and the ground cultivated.

I do not pretend to be a political arithmetician; but, from what I have obſerved, I cannot eſtimate the loſs of valuable land, in conſequence of the neglected ſtate of old hedges in England, at leſs than an hundred thouſand acres: beſides the

the deſtruction produced by harbouring vermin, and the want of a free circulation of air. Were this loſs only to fall upon the proprietors, to whoſe negligence it is owing, the injury would be immaterial: But, as every part of the general property, which is improvidently waſted or neglected, is a real loſs to the public, this object becomes worthy of ſerious reprehenſion. If my ſuppoſitions are well grounded, the public loſes annually, through this circumſtance, not leſs than the value of half a million Sterling; and the land thus left waſte, might employ eight thouſand families of labourers and artiſans, giving employment and bread to forty or fifty thouſand human beings.

STIVA.

Merſe,
Auguſt 1800.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Inequality of Weights and Meaſures.

GENTLEMEN,

I AM a country man, who cannot boaſt of much learning. An education at one of our pariſh ſchools brought me the length of reading, writing, counting, and *Penna*. But though I was reckoned clever, and a great favourite of my maſter, who was in hopes of eſtabliſhing his character, by the figure which my genius, brought to light by his ability, ſhould make in the world, juſt as I was beginning to learn *Dominus*, I was taken from ſchool by my father, who wanted ſuch a lad to herd his cattle. This change was at firſt very agreeable to me But two or three days ſoon made my time hang heavy, and I regretted my books and my play-fellows. Theſe, however, were in time forgotten; and my chief employment was, tending the cattle, or holding the plough, (to which my ſtrength ſoon promoted me), and my chief delight conſiſted in reading the ſcriptures. In this way, ſeveral years paſſed away, when my father's death made me heir both to his tack and ſtock.

Having now more money, and being ſometimes obliged to go to market, I bought ſome books, which at leiſure hours might gratify my favourite inclination. Some of theſe (the

Gentleman

Gentleman Farmer in particular) gave me a new light in my own profeſſion. Conſulting with ſome very ſenſible men, neighbours of mine, we ſet about trying a new method. The rotation of cropping which we have adopted is fourfold, viz. oats, turnips or potatoes, bear, hay. We do not, however, keep more ground under tillage, than is required to keep our ſtock through the Winter. With our turnips, we fatten ſome beaſts for the butcher. This mode is now almoſt generally followed throughout this diſtrict, and anſwers ſo well, that, though ſituated in a rainy and high country, our harveſt is generally finiſhed before that of other places more favoured by nature.

In my dealings with ſeveral counties, and even with different parts of the ſame county, I have often been puzzled by the inequality of the weights and meaſures by which grain is ſold. I cannot ſee any thing which prevents the Legiſlature to correct this abuſe, by ordering the ſame ſtandard to be uſed throughout the kingdom. But, on communicating theſe my ſentiments to others more wiſe than myſelf, I am informed that it has already been in vain attempted. I acquieſced in this anſwer, as I always do in every opinion of my betters, where they are more able to judge than I can poſſibly be. For this evil, I hope there is ſtill a remedy left. You, Gentlemen, muſt know, if there be any table of the proportions which the different bolls, buſhels, &c. in uſe at different places, bear to each other. If there is none which contains ſuch uſeful information to the farmer, I beg leave to ſuggeſt, whether it would not add much to the utility and circulation of your publication, (at leaſt to ſuch as myſelf it would be infinitely more valuable), if it contained a table ſuch as I have mentioned. By comparing the ſize of the different meaſures uſed, we could obtain a much more accurate knowledge of the prices of grain, and of all the articles of common conſumption at different places, as reported in your Magazine and the newſpapers. Such a knowledge, univerſally circulated, would be attended with moſt beneficial effects. It would put the honeſt, but not ſo far travelled farmer, on a footing with the knowing corn-dealer, or ſharp butcher. It muſt tend, in a high degree, to the extenſion of theoretical, as well as practical knowledge of huſbandry, and, in theſe times of ſcarcity, would have conſiderable influence on the equal reduction of all the commodities of life. Nor would the information requiſite be very difficult to obtain. Your numerous correſpondents and readers, in different parts

of

of the kingdom would contribute their aid; and I am perſuaded that nothing is required but the formation of a proper plan, to have it quickly completed.

Of theſe obſervations you are at liberty to make what uſe you pleaſe. I have only farther to ſay, if you can furniſh us a table, it will be highly acceptable to your well-wiſhing

COUNTRY MAN.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

New Galloway, 16th June 1800.

GENTLEMEN,

As it is believed a great deal of fruit was loſt laſt year, from the perſons, who had it, not knowing the beſt mode of preſerving it, it might be doing a conſiderable ſervice to the public, to inſert in your next Number, an account of the beſt method of ſtoring it up. As this muſt be a matter well known to thoſe who are in the uſe of keeping great quantities, I preſume you can eaſily furniſh the neceſſary information.

It would be alſo obliging ſome of your correſpondents, to acquaint them where the beſt kind of dioptrical bee-hives are to be had. I am,

GENTLEMEN,

Your moſt obedient,

A—— ——n.

Note by the Conductors.

It would have given us much pleaſure to have furniſhed our correſpondent with the information required; but the management of fruit is ſo little underſtood in this northern part of the iſland, that we muſt refer the query to our ſouthern friends, who, we truſt, will be kind enough to give a ſatisfactory anſwer. N.

FOR

FOR THE FARMER'S MAGAZINE.

An Eſſay on the Proper Size of Farms.

THIS will beſt appear from obſerving the *effects* of the different claſſes of farms as at preſent exiſting, and which may be arranged under the following heads:

I. Of Farms altogether under *Tillage.*
II. Of Farms altogether in *Paſture.*
III. Of Farms *partly in Tillage, and partly in Paſture.*

HEAD I.

Of farms altogether under *tillage*, yet including as much paſture as may ſerve the milch-cows for the family-uſe alone.

Theſe may again be ſubdivided under the following claſſes:

1*st*, Of ſmall farms in the occupation of *mechanics.*

2*d*, Of ſmall farms in the occupation of *husbandmen*, having no other profeſſion.

3*d*, Of *two* or *more* farms contiguous, cultivated by *one* farmer.

4*th*, Of *ſeveral* farms *ſeparated* from one another, but in one man's occupation. Firſt, then,

Of ſmall Farms in the Occupation of Mechanics.

Theſe are generally to be met with in the vicinity of towns or large villages; there are ſome examples of them alſo in the ſmaller villages ſcattered over the country, in which the wright, the ſmith, the webſter, or the ſutor, have their bit of land.

The huſbandry of all theſe, without a ſingle exception, is bad; the more inexcuſable, when it happens to be in the immediate vicinity of a populous town, where, from market and manure, they ought to be in the beſt ſtate: but there is an inherent vice in this ſyſtem, which no ſituation can counterbalance. For agriculture, in ſuch hands, can never be more than a ſecondary object, or rather a by-job altogether: But, unhappily, this is not all the miſchief; for even their primary profeſſion ſuffers in their unavoidable diſtraction of attention between the different occupations: And thus, from commencing their agricultural career, as bad huſbandmen, they commonly

commonly dwindle down, in the end, to be ſorry mechanics likewiſe.

It would, however, be wrong to prohibit this ſpecies of huſbandry. Why ſhould a man be hindered from giving vent to his folly in this line, as well as in any other? His time, to be ſure, is very ill beſtowed on ſuch a ſpeculation; but it would be worſe *ſpent* in the *tavern*, on the *turf*, or in the *cock-pit*; and if there be any truth in the notion, that the *health* of ſuch people is promoted by rural operations, it may compenſate, in ſome degree, to the ſtate, what it thus loſes by their wretched cultivation.

There are, indeed, ſome examples of farms on a larger ſcale, that are occupied by *townſmen*, in which the cultivation is by no means bad. Some people, however, are ill-natured enough to remark, that the original profeſſion declines in proportion as the farming advances: but the conſideration of this is foreign to the preſent queſtion.

2. Of *ſmall* Farms in the hands of *Huſbandmen having no other profeſſion.*

By a farm of this deſcription, I mean one of a *ſingle plough-gate* of land, containing from 30 to 50 acres.

In this ſituation, the farmer cannot afford *to lye idle*, as it is termed; he muſt be a labourer himſelf, and is commonly the hardeſt wrought labourer on his farm. He is indeed the only able-bodied man about his *town*; his ſervants conſiſting of a raw lad to aſſiſt him in the field-operations, and a boy to take care of the cows. In Winter, he may have an old man, ſupernumerary, to aſſiſt him four or five months to thraſh out his crop; but at all ſeaſons, he receives much aſſiſtance from the female part of the family. The women are ever kept in full employment. They *redd* the barn to the old man; they fork the dung, and ſpread it along with the lad; they muck the byre, and fother the nolt with the boy; they carry the ſeed-corn to the *gudeman*; and, in company with the *gudewife*, they weed the lint, and dreſs it; and, beſides ſpinning, and the daily operations of the *dairy*, and making of the *porridge* and *kale*, they have the occaſional drudgery of the waſhings to perform too. Nothing, indeed, can exceed the induſtry of this part of the family, but the cheerfulneſs of their diſpoſition, and their unaffected ſimplicity of manners.

With

With regard to the agriculture of this plodding claſs of farmers, it depends very much on the practice they have been educated in. No improvement almoſt was ever known to originate with them. They have even a reluctancy to adopt any that may be ſuggeſted to them. This does not ariſe, however, from any perverſity of diſpoſition, or failure of intellect but it is the natural conſequence of their confined ſituation, and ſcarcity of tranſactions. They cannot afford to mix with the world from curioſity: even their indiſpenſable abſence from home, on account of buſineſs, is peculiarly inconvenient and expenſive, as it lays the full half of their home-operations at a ſtand, while the little buſineſs they have to tranſact abroad is not full employment for the time.

There are, however, many examples of good cultivation in this claſs, (in well eſtabliſhed modes of good cultivation they are indeed excelled by none); but it will always be found, that the moſt intelligent of them are thoſe who have had, from ſome ſpecialty in their circumſtances, an unuſual intercourſe at an early period with ſociety; or who, living in the vicinity of a great town, have hence acquired, at little expence, a knowledge of mankind, and of the principles of improvement, which, in a remote ſituation, in their limited ſphere, they never could have attained.

Whenever our country is ſo completely cultivated, that there will not remain a ſingle improvement that can be made, either by incloſing, draining, watering, &c. or in cattle, implements, or rotation, then may it be laid out into ſuch ſmall farms, and conſigned into the hands of theſe little tenants, who will be able, perhaps, without any great loſs, to retain the ſoil in fertility. Such an arrangement may be even neceſſary, from a regard to the morals of the people; as, from the diſſipation which will naturally accompany ſuch a ſtate of proſperity, there would be no claſs of men ſo apt from their circumſtances, to retain the ſimplicity of manners and laborious induſtry of ancient times. Even at the preſent day, they may be placed in the vicinity of great towns, where the land is already, for the moſt part, in an improved ſtate, as their habits of induſtry and temperance would, for ſome time, prove a barrier againſt the ſpread of the enervated licentiouſneſs of city-depravity; though it might ſtill be neceſſary, from time to time, to renew the race from more remote parts, in proportion as the preſent poſſeſſors become contaminated with the vices of a more luxurious life. This change of tenantry would be of advantage, were it mutual between the parties; for,

for, if thoſe who have been living for a ſeries of years in the neighbourhood of a great town, were removed to a more remote ſituation, their more intelligent ideas in their profeſſion would operate to the more rapid melioration of the leſs improved lands on which they might chooſe to ſettle, while they would loſe the habit of diſſipation, from being leſs in the way of temptation to indulgence.

At preſent, the produce brought to market from ſmall farms, is always leſs in proportion, than from farms of a larger ſize; becauſe a greater proportion of it is conſumed at home, by the more proportionably numerous ſtock of unproductive cattle; an inherent evil in little farms, which no genius in the occupier can obviate: and, in general, there is even leſs produced on the ground, from the circumſtances before ſtated, with regard to the abilities of the huſbandman himſelf. With regard to the effect of ſmall farms on population, that will beſt appear from the next ſubdiviſion.

3. Of two or more farms lying *contiguous*, occupied by one farmer; being the general means by which *great* farms have originally been formed.

Though this ſyſtem of letting lands has ever been a grievous ſubject of lamentation with half-witted politicians, it has nevertheleſs, in practice, been found to be the moſt beneficial to the country, and ſtill continues to add to the general proſperity.

When two or more farms are conjoined, the following effects ariſe: 1. The *expence of labour is reduced*, in ſo far as the peculiarities in the ſoil in one, are contraſted by thoſe in another farm; ſo that when the land is not in a condition of being laboured in one, it may with propriety be laboured in another; as in the example of one of the farms being of a dry ſoil, and the other of a wet; and which is commonly a conducing reaſon for the conjunction. Even where the ſoil is all of the ſame nature, there ariſes an advantage in the labouring of a great farm, from the concentring of the ſtrength of men and horſes at any particular operation, by which it is got finiſhed in proper caſe, with leſs riſk of being ſpoiled, from the uncertainty of weather, &c. 2. The *expence of houſekeeping* is reduced, in proportion as there are fewer families of farmers to maintain. 3. The farmer, having more buſineſs, is more abroad in the world; is converſant in a higher line of life; and thus, having more opportunities of information,

he, in fact, becomes better informed; and as he has, 4. The *profits* of a *greater quantity* of ground in his hands, he is thence more able to introduce an improvement in practice or in ſtock, from another quarter, or better enabled to propoſe it himſelf, from his own obſervation and experience.

The real produce of the lands becomes thus augmented; and as there is leſs of it conſumed at home, (there being fewer men and horſes to maintain), a ſtill greater proportion goes to market.

The *population* on the land is alſo augmented; for although it be true, that the common operations of the farm are conducted by fewer hands, yet there is always ſome extra work going forward in the various operations of improvement; ſuch as, in hedging, ditching, levelling, draining, building, &c. which the little farmer never would have thought of, or never have performed. The great farmer alſo excels the little tenant in a circumſtance, which, more than any thing elſe, conduces to the population of the country; which is, that the *greater part of his ſervants are married, and have families of their own:* and this he chooſes, not from any affectation of patriotiſm, but from a principle, of more effective influence—a regard to his own intereſt; as he finds, that a numerous houſehold of unmarried ſervants are very unmanageable, and that he is better ſerved with ſober married hinds, who board in their own houſes, at leſs expence, and more to their ſatisfaction, as well as his own.

The following ſtate, in regard to this point, of a farm in the vicinity of Edinburgh, conſiſting of about 280 Scotiſh acres, and which, prior to 1736, was in three farms of two ploughgates each, and which has ſince been united into one, ſhows this in a more explicit manner.

1735.		1793.	
Families of farmers -	3	Family of the farmer -	1
Ditto of cottagers -	6	Families of cottagers -	14
Total families - - -	9	Total families - - -	15
Horſes - - - - -	33	Horſes - - - - -	16

At this period, the increaſe from the married ſervants, was not ſufficient to keep up the number of unmarried ſervants, who, of courſe, were obtained partly from the neighbouring

At the preſent period, the increaſe from the married ſervants does much more than ſupply the population neceſſary. Their ſons and daughters are therefore ſent to ſupply

1735.	1793.
bouring villages; being ſons of weavers, tailors, &c.	ply the neighbouring towns, or to *the ſmaller arms in the neighbourhood which cannot ſupply themſelves!* There are alſo at this time, four young men from this farm at ſea.
Rent about 230l.	Rent 636l.

As to the queſtion, *How large ought a farm to be?* I can perceive no bounds, in point of propriety, except thoſe which nature has ſet to the genius of the farmer, and Providence to his fortune; for the larger that the farm be, if the tenant has capital, and abilities anſwerable, the better it will be, in every reſpect, to the community; as not only more produce is brought to market, but actually more is produced, from the ſuperior advantages the great farmer enjoys, of being more able to make improvements, becauſe more wealthy; but alſo better inclined to do ſo, from being more intelligent. We even ſee, that the population of a country thus occupied, is augmented, from the circumſtance of his intereſt being concerned, in giving the preference to married ſervants, inſtead of lads and boys, and ſuperannuated men, with which the ſmall farms are peopled. That he does not employ the whole progeny of theſe hinds, is a favourable circumſtance to the public, as they ſerve as an excellent nurſery for the ſupply of the mechanical branches, which not only cannot be recruited from a country laid out in ſmall farms, but are themſelves drained of their youth, to keep up the population of that unproductive ſyſtem *.

Inſtead, therefore, of inquiring what ought to be the ſize of a farm, an aſſize ought to be held on the judgement of the farmer, and the capital he is able to command; for although it may be remarked, that the powers of the mind, even in the ſame perſon, expand and contract, according to the ſituation in which he may for ſome time be placed, yet there can be no doubt, alſo, that there are people whoſe genius

* It is curious to obſerve the cant of declamation (for depopulating the country) which has, for theſe laſt forty years, been kept up againſt the uniting of the ſmall farms, which has taken place chiefly in that period, which has not only been an æra of great agricultural improvement, but the population, from actual inveſtigation, has increaſed, in Scotland, near 300,000 ſouls, or about one-fifth of the whole.

nius far furpaſſes the general run in whatever circumſtances they may be placed. Thus, while it would require a man of conſiderable abilities to manage, in the beſt manner, a farm of 300 acres in tillage, I ſhould ſuppoſe, that were the vaſt abilities of a *Fox*, or of a *Pitt*, to be concentred on agriculture, with an inclination to the profeſſion, they could, with equal eaſe, manage a farm of ten times the extent: at leaſt, thoſe who undertake ſuch a charge, and do juſtice to the ſubject, might be conſidered, in agriculture, as thoſe two great characters are in politics, among the moſt enlightened of their compatriots.

A farm in the vicinity of a great town, requires more abilities to manage, in proportion to its extent, than a farm in a more remote ſituation; becauſe the branches of operation are more minutely divided, and the ſources, from which the revenue is obtained, flow in more various channels; while the general economy of the whole is regulated by more uncertain and variable principles.

4. Of *ſeveral* farms in the poſſeſſion of *one* farmer, lying at *a diſtance* from one another.

In this ſyſtem, the advantages are not altogether ſo great as when the farms are contiguous: For, 1*ſt*, The contraſt in the ſoil gives no advantage in the labour; nor can the ſtrength of the whole be concentred on one object: of courſe, a greater expence in labour is incurred. 2*d*, As the maſter cannot overſee the whole perſonally, he muſt delegate his authority in part to an overſeer, which ſeldom turns out ſo effective. But, in other reſpects, the advantages are nearly equal; and in population it is ſuperior; for more people are required to do the ſame work. The profit, of courſe, will be diminiſhed; but as the farmer will be more in the practice of traverſing the country, he will naturally become more intelligent, and thence carry on his plans more judiciouſly.

Head II.

Of Farms altogether in Pasture, *including a ſmall proportion of Tillage, for raiſing Corn and Potatoes for the reſidenters.*

Theſe may alſo be conſidered under the ſame ſubdiviſions as in the former head.

1*ſt*,

1*st*, With reſpect to mechanics interfering with this ſyſtem, there is hardly an inſtance, though it would be much more for their advantage, if they converted their pitiful poſſeſſions to the maintenance of a milch cow, or the rearing of a young beaſt, than, in their preſent wretched ſyſtem of tillage, oppreſſing themſelves, and diſgracing the country. But, for this purpoſe, it would be neceſſary that their patches were incloſed: But that would be by far too great an exertion for their genius; and ſo I ſhall leave them to their own miſmanagement.

2*d*, Of *ſmall* paſture farms in the occupation of tenants having *no other occupation*.

There cannot well be a very ſmall farm of this deſcription, as the attention required would not be ſufficient employment, neither would the profit to be derived be a ſufficient recompenſe for conſtant attention. They muſt neceſſarily, therefore, be of greater extent than the ſmall arable farm, where there is always abundance of employment to the little tenant; and although there may be little recompenſe to him as a *maſter*, yet he is generally underſtood to be ſufficiently remunerated for the labour which, as a *ſervant*, he beſtows upon it.

The ſame circumſtance which promotes the proſperity of a corn-farmer on an arable farm, and the conſequent proſperity of the country, will, I am perſuaded, operate in the ſame manner upon a cattle-farmer in a paſture farm, viz. that the larger that the concern be, if the tenant has abilities anſwerable, the more enterpriſing will he become, and the country will the more ſpeedily be improved in the breed of cattle, and melioration of paſture lands.

3*d*, Of *two or more* farms lying *contiguous*, in the occupation of one tenant.

That the tenant in this ſituation will be more wealthy and more intelligent, and hence, being more enterpriſing, will be more beneficial to the country, has already, in the foregoing article, been noticed; in addition to which, the following remarks occur.

A man will be able to manage a paſture farm of greater value and greater ſtock, on a rich ſoil, than on a poorer one, which muſt be more extenſive to yield the ſame produce,

and will therefore require more exertion to overſee. The quantity of land and quantity of ſtock that a farmer may have abilities to manage in a paſture farm, may be vaſtly greater, than in a farm under tillage; as there are fewer ſervants to overſee, and as the proceſs of breeding and feeding cattle is much leſs complex than that of raiſing corn.

The effect on population, of uniting two or more paſture farms into one, will be much the ſame, as formerly ſtated, with regard to farms in tillage; for, although the tenant may be enabled to keep fewer herds, yet he will naturally chooſe that theſe ſhould be married men, boarding in their own families: even were this to produce no increaſe of population, it ought to be held as beneficial to the country; for the great farmers herds have a better chance of getting full employment, than in a ſmall farm tending a ſmall flock,

"The herd diminutive, of many hues." THOMSON.

where they are little better than half idle: for a population of idle people ought to be exploded; as not only are the faculties of theſe people themſelves locked up for want of exertion, but the money which their maintenance requires, is thus diverted from the channels of enterpriſe and improvement into which it might otherwiſe have flowed.

4*th*, Of *ſeveral* paſture farms, at a *diſtance* from each other, in one tenant's occupation.

The effects in this caſe are almoſt the ſame as if the farms lay contiguous, provided each ſeparate farm has all the varieties of paſture, and proper ſhelter for the cattle; but if this is not the caſe, it were better for the farmer (and for the public) that they lay conterminous to one another, as they thereby could afford accommodation, to the mutual advantage of the whole. So far, alſo, as loſs may ariſe from the maſter not being able to ſuperintend the whole, ſo far will there be a diſadvantage in having diſtant farms in paſture, as well as diſtant farms in tillage; but, on the other hand, as was before obſerved, the farmer himſelf will become more intelligent, in proportion as he has to traverſe a greater range of country, from which he will the more readily introduce or make improvements in the breed or management of his flock.

HEAD

Head III.

Of Arable and Pasture United.

Whatever has been ſaid reſpecting the *ſize* of farms, in the two former heads, is equally applicable to this; the larger that the farms are, the more intelligent and enterpriſing will the farmer himſelf be; and hence, from his more ſpirited and judicious exertions, the community at large will derive a greater advantage.

This mode, or ſyſtem of farming, is the moſt judicious of the whole, as it promotes the intereſt of all parties concerned, the proprietor, the tenant, and the public at large, more than either of the two modes ſeparately. It promotes the intereſt of the proprietor, by affording him a greater rent: It promotes the intereſt of the tenant; becauſe he will be able to manage a greater extent of land, than in a farm wholly in tillage; and he will have more intercourſe with the world, than in a farm wholly in paſture; and hence, performing more buſineſs, and being more enlightened, he will become more wealthy: Finally, it promotes the intereſt of the public; becauſe a greater proportion of the produce will be brought to market, and even a greater crop produced. This ariſes from two cauſes: 1*ſt*, There will be fewer unproductive cattle to eat up the produce at home: 2*d*, The lands being alternately in tillage and in graſs, they will be kept in better condition; and the crops of corn, and of hay or paſture, will be more luxuriant, and of a better quality.

With reſpect to *population*, this ſyſtem is unfavourable in one caſe, and favourable in another. It is unfavourable in the caſe of converting a farm, that had been wholly in tillage, into part tillage, and part paſture; for paſture-land always requires fewer people to manage it, than lands in tillage; but, for the ſame reaſon, it is favourable to, or increaſive of population, when paſture lands are converted to the production of grain. In a great proportion of the beſt lands of England, it would be highly for the advantage of all parties, that this ſyſtem were adopted, inſtead of the grazing ſyſtem, which prevails without variation. In Scotland, however, the caſe is different; there, the greater part of the arable lands, which formerly were kept wholly under the plough, have been moſt judiciouſly improved, from the introduction of this alternate

ſyſtem, and which has, to a certain extent, diminiſhed the number of people employed in agriculture, greatly to the mortification of the gloomy-minded declaimers againſt the preſent times, who, in the blindneſs of their rage, denounce the uniting of ſmall farms as the cauſe of this miſtaken national calamity. But, even were this notion to be well founded, (and it would not be difficult to ſhew that it is not), yet ſurely it is not ſolely the *numbers* of people employed in any profeſſion, that ought to render them reſpectable in the State; regard muſt alſo be had to the *ingenuity* with which they are actuated, and the *induſtry* with which they carry on their operations. People, not judiciouſly employed, are little better to the State than if they were not employed at all. H.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

As a reader of the Farmer's Magazine, and a well-wiſher to that Publication, I ſend you the following obſervations and experiment, anent the raiſing of cabbages and open kail.

Owing to the ſeverity of laſt Winter, and inclement Spring, kail plants of every deſcription were ſcarce, and ill to be got in the north of Scotland; in particular, the different ſpecies of cabbage plants; and what remained, were ſo weak and ſmall, as ſcarcely to be worth planting. Having ſome roots of the early kind of laſt year remaining in the ground, which were beginning to put out young ſhoots about the end of April, the idea ſtruck me of pulling theſe old roots, and, after ſtripping them of all the young ſhoots, except the ſtrongeſt and healthieſt-like one, to replant them on another piece of ground, in the following manner: I cauſed a ſmall furrow be made in the ground of the plot I intended for them, and put the old ſtock on its ſide, covered it up with earth, keeping the ſhoot above like a young plant. They never went back, grew remarkably faſt, and have cloſed very well; and were ſeveral weeks earlier than thoſe planted from young plants before them.

I tried the ſame experiment with open kail, and find they anſwer equally well.—If you think this may be of any uſe to the public, or conſidered worthy of a place in your publication, you are welcome to uſe it. I am, a wellwiſher to agricultural improvements.

July 15, 1800. *A Perthſhire Farmer.*

TO

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

I take the liberty of ſending you ſome obſervations on the uſe of lime in Yorkſhire; which, if they meet with your approbation, may be inſerted in the next Number of the Farmer's Magazine.

The common way of uſing lime in the Weſt-Riding of Yorkſhire, is to lay it upon Summer-fallow that is intended to be ſown with wheat, in the proportion of from 100 to 150 buſhels of ſhell-lime, brought from the neighbourhood of Pontefract; it is applied at any time during the Summer that ſuits the convenience of the farmer. Some farmers lay the ſame quantity upon the turnip-fallow, with the addition of *farm-yard dung*, bones, or *rape-duſt*; in either of which caſes, when it is laid upon land that has been long in tillage, and previouſly limed, it is of no ſervice; and if the Summer months are warm and dry, it is often deſtructive to the turnips. This error ariſes, partly from an ignorance of the properties of lime, and partly from a want of due attention to the ſtate of the ſoil to which it is applied. There is a lime of another kind in the Weſt-Riding, got at Emſall near Doncaſter, which is often uſed for wheat, generally upon leas after oats or barley: it is ſpread upon the ſtubble before the ſud-furrow is given, and generally found ſerviceable; as in that way it meets with abundance of vegetable matter, upon which its action is exerted. This lime is ſaid, by a perſon who examined it chemically, to contain clay, in the proportion of one third of its weight. From ſixty to eighty buſhels are laid upon the acre. From its ſtrength, it does not appear that the land will bear more; as, in moſt inſtances where a greater quantity has been applied, it has been found to hurt vegetation. This is the reſult of the experience of almoſt every farmer in the circuit where it is uſed.

The Pontefract lime is mixed with ſand, nearly in the proportion of one third of its weight, and, being of a milder nature than that already deſcribed, requires to be laid on in greater quantity; 200, and even 250 buſhels, unſlacked, are frequently laid upon the acre with advantage, eſpecially when well watered.

It appears that no correct idea has yet been formed, either of the qualities of lime, its operation upon the ſubſtances it meets with in the ſoil, or the quantity required for different ſoils. Owing to a want of this knowledge (a thing ſurely attainable)

tainable) much money is uſeleſsly expended, and much labour beſtowed, which, under the direction of better information, might be ſaved. The principal error of our farmers, conſiſts in ſuppoſing lime to poſſeſs fertilizing qualities in itſelf; and that, without operating upon the ſoil, or the ſubſtances it meets there, it is an enriching manure. Chemiſtry has diſcovered no other principle in limeſtone, but calcareous earth kept together by fixt air, with the addition of clay in ſome inſtances, and ſand in others. Mr Anderſon of Aberdeenſhire ſays, "Lime can have no manure within itſelf; but operates only as an alterative or ſtimulus to other manures."

In this place, I am ſorry to differ in opinion with Mr Anderſon, to whoſe diſquiſition I am in a great meaſure indebted for the little knowledge I have of its nature; as to its operation, I ſpeak from experience and obſervation. In Vol. I. p. 484, Mr Anderſon ſays, "Calcareous matters act as powerfully upon land that is naturally poor, as upon land that is more richly impregnated with thoſe ſubſtances that tend to produce a luxuriant vegetation." If Mr Anderſon meant barren moor land, that has never been in a ſtate of cultivation, covered with bent, heath, lyng, and other vegetables, I agree with him; but not upon poor ſoils that have been long in tillage.

Mr Anderſon further obſerves, "Writers upon agriculture have been long in the habit of dividing manures into two claſſes, viz. 1. Enriching manures, or ſuch as tend to render the ſoil more prolific, however ſterile it may formerly have been; of this claſs, dung holds the firſt rank. 2. Exciting manures, or ſuch as are ſuppoſed to have a tendency to render the ſoil more prolific, merely by acting upon thoſe enriching manures that had been formerly thrown into it, and, for want of a proper ſtimulus, had remained dormant." Lime is unqueſtionably the foremoſt of this claſs. With this doctrine my own experience in a great meaſure agrees; as every obſervation I have made, confirms my belief of its being a ſtimulus only. The ſame author further obſerves, "That, in conſequence of this theory, it would follow, that lime would only be of uſe as a manure, when laid upon rich ſoils; and that, when it was applied to poor lands, it could produce no good, and in many inſtances hurtful effects."—"I will frankly acknowledge," ſays he, "that I myſelf was ſo much impoſed upon by the beauty of this theory, as to be hurried along with the current, in the firm perſuaſion of the truth of this obſervation; and for many years did not ſufficiently advert

vert to thoſe facts that were daily occurring to contradict it. I am now, however, convinced, that lime, and all calcareous manure, produce a much more immediate improvement upon what are termed ſterile ſoils, than upon ſuch as are richer; and that lime alone, upon ſuch ſoils, will produce a greater, as well as more laſting degree of fertility, than even the beſt dung."

This aſſertion of our author, is not quite in uniſon with the other parts of his work; where, after a very learned diſquiſition upon the qualities of lime, and its formation in the bowels of the earth, he concludes in a manner that does not warrant the idea of its operating in the way he mentions; and I can with truth aſſert, that I have never found it to repay the expence, when laid upon wore-out lands, and ſuch eſpecially as had been previouſly limed.

My own experience enables me to recommend the uſe of lime, in the following manner: Let the farmer conſider well the ſtate of his ground, and its management previous to putting on a dreſſing of lime. If it has been ploughed out of graſs, either having lain long in meadow or paſture, a heavy dreſſing, of from 250 to 300 bolls per acre, put on a good Summer-fallow, will be of very great benefit, as, upon ſuch ſoils, it will meet with abundance of vegetable matter, upon which it will act in ſuch a manner as to increaſe its fertility. It may alſo be uſed with advantage, every eight or ten years, upon land that is kept under the plough; provided it is well manured with ſtable-dung, bones, or rape-duſt, eſpecially if ſuch lands are under a proper rotation, ſuch as, 1. Turnips; 2. Barley, with graſs-ſeeds; 3. Paſturing with ſheep; 4. Wheat. Where it is uſed in this manner, I would recommend it to be laid on in the early part of Winter; in that way, it will become perfectly effete before the turnips are ſown; a matter of more importance than is generally imagined.

It will alſo be highly beneficial upon ſtrong and wet ſoils, where a ſuitable rotation of crops is followed. The rotation I would recommend is, wheat or barley after fallow, broad clover, white clover and graſs ſeeds; paſturing with ſheep as much as poſſible; afterwards wheat. This is at preſent the practice of the beſt farmers. I am,

GENTLEMEN,

Your obedient ſervant,

A YORKSHIRE FARMER.

FOR

FOR THE FARMER'S MAGAZINE.

Letter from a Scots Farmer, during a Tour through England, to his Friend in Edinburgh.

LETTER IV.

HAVING now ſeen ſeveral of the beſt cultivated Engliſh diſtricts, I proceed, with great ſatisfaction, to detail my remarks on the huſbandry of Eſſex, Suffolk, and Norfolk; and I am truly ſorry that the condition of ſome of the conterminous counties prevents me from beſtowing equal praiſe upon the management therein generally practiſed.

Leaving London upon the laſt day of June 1799, we travelled through the heart of *Eſſex*, by *Rumford* and *Colcheſter*, and in our progreſs ſaw much to commend, and very little to cenſure. The general ſoil of the diſtrict through which we paſſed, appeared to be of the kind uſually called *loam*, though of many varieties; the greateſt part of it, as we were informed, was under leaſe; and the poſſeſſors are eminently reſpectable.

You will eaſily figure, that a paſſing ſtranger ought always to ſpeak with diffidence upon thoſe matters. It is only a ſmall part of the country which he can perſonally examine; and he is neceſſitated, in numberleſs inſtances, to take his information from perſons, who, perhaps, are unqualified for communicating it in an accurate way. Still, under theſe circumſtances, if he ſees a country well cultivated and uniformly productive; if he diſcerns good houſes, good fences, good implements, and good roads; he may fairly pronounce its rural economy to be in a comparatively perfect ſtate: and all theſe things are to be found in the county of Eſſex in a ſuperior ſtyle.

Very little naked Summer-fallow is diſcernible in Eſſex; nevertheleſs the ground is generally in a clean and huſbandman-like condition. The anti-fallowiſts bring this as an argument againſt the neceſſity of fallow in other diſtricts, without reflecting that the ſoil, climate, and practices, are materially different from almoſt every other part of the kingdom, and cannot be imitated, unleſs perhaps in five or ſix counties. The argument, in fact, cuts two ways. A want of fallow, either proves, that the land is very well or very ill managed. In Eſſex, we admit, it is a proof that a proper ſyſtem is practiſed; but many other counties have as little fallow

fallow as Eſſex; the conſequences of which are,—the ground is dirty, being ſtocked with annual and perennial weeds, in ſtead of corn and artificial graſſes; unproductive to the poſſeſſors, becauſe the ſtrength of the ſoil is carried off by the aboriginal inhabitants, who enjoy an hypothec preferable either to the Crown or Landlord; and incapable of receiving ſuitable cultivation, until they are diſpoſſeſſed.

The great object of the Eſſex Farmer appears to be, to raiſe wheat; and, in our view, three eighths of the arable land were carrying that golden crop. We ſaw few oats; not a great breadth of barley; while perhaps one half of the diſtrict was under the meliorating crops of clover, beans, peas, potatoes, and turnips. If there be a juſt principle in farming, it is to have culmiferous and leguminous crops alternately; and in Eſſex this principle ſeems to be adhered to ſteadily. It is not a matter of great importance, which of the varieties, that is to ſay, whether wheat, barley, or oats, are taken as the culmiferous crop; but the ſelection ought to be made in conformity to the ſoil, ſeaſon, climate, and markets. Theſe circumſtances all operate here in preference of wheat, and the Eſſex farmers very judiciouſly beſtow their chief attention to its culture.

We were, in truth, greatly delighted with the huſbandry of Eſſex, as it is, in a manner, all cultivated like a garden. The poſſeſſors are in a flouriſhing ſtate, and marks of opulence are diſcernible among the great body of them.

After viewing the town of *Ipſwich*, which is a large place, we proceeded through the county of *Suffolk*, which, making allowance for local circumſtances, is under ſimilar good management with Eſſex. The ſoil, however, is not ſo deep; a great part of it is incumbent upon ſand and chalk; and the diſtance from London leſſens the value of the commodities produced. The cultivation was admirable, the rotations excellent, the lands clean, and the crops which covered the ſoil were weighty and luxuriant.

Here the *wheel-plough* came under our inſpection; but it ſhall be noticed at greater length, when we enter upon the huſbandry of Norfolk. The beſt breed of *horſes* for country uſe is to be ſeen in Suffolk; they are not very tall, but broad, full barrelled, well ſhouldered, and generally of a cheſnut colour. They are of an excellent ſize and ſtrength for rural employment, and, except in the difference of colour, bear a greater affinity to our beſt Lanarkſhire horſes, than any other breed in the iſland.

The

The management of *dung* is here well underſtood, as none is laid upon the ground, but what is in the moſt perfect rotten ſtate. It appeared that a year's dung is in moſt caſes kept on hand, or otherwiſe it is difficult to conceive how the preparation of it could be ſo forward. The farmers were buſy in driving it out to their turnip-fields, upon which dung in no caſe ſhould be applied, unleſs fully ripe.

Every agriculturiſt has heard of *Norfolk*, and its huſbandry; and perhaps no more has been ſaid in its favour than is juſtly merited. With a large portion of ſandy ſoil upon a bottom of chalk, it is one of the moſt productive counties in the kingdom, and, acre for acre, exports more produce than any other diſtrict. To what cauſe can this ſuperior produce be aſſigned? Other counties have better ſoil, as good a climate, ſuperior local advantages, and yet are undoubtedly far behind this celebrated diſtrict, in the extent of rural commodities carried to market.

Many cauſes may be aſſigned for this celebrity, which we ſhall ſlightly notice: 1*ſt*, The greateſt part of the land is under leaſe. 2*dly*, The farms are of conſiderable ſize. 3*dly*, As few manufactures, except at *Norwich*, are carried on, the capital ſtock of the inhabitants is chiefly employed in cultivation. *Laſtly*, The turnip ſyſtem being early introduced, proved of eſſential ſervice, in bringing the numerous and originally barren ſands of the diſtrict into a fertile and productive condition.

The defective parts of the Norfolk management (and we ſtate them with diffidence) are, the general uſe of wheel-ploughs; the common mode of raiſing turnips, viz. in the broad-caſt way; and the folding of ſheep. Theſe are undoubtedly antiquated practices, and ought to be exploded by ſuch enlightened cultivators.

Wheel-ploughs have certain properties which are not poſſeſſed by the *ſwing-plough*; ſuch as—they may be pitched to any deepneſs neceſſary, and the breadth of the furrow may be regulated with almoſt mathematical exactneſs. They are alſo capable of being wrought by unexperienced ploughmen, which is not the caſe with the ſwing-plough; but, perhaps, to this ſource may be traced the very general bad ploughing practiſed in many parts of England. Without, however, enlarging upon this topic, it may be added, that the increaſed friction of the wheels overbalances any benefit gained by the uniform deepneſs with which the inſtrument goes; and that a ſwing-plough, provided with a

ſimilar

ſimilar ſhare, and in the hands of a good ploughman, is capable of executing as much work, and is eaſier drawn, than the wheel-plough.

As for broad-caſt turnips, we are at a loſs to conceive what advantage can be gained by this mode, in preference to drills, eſpecially upon ſuch ſoils as prevail in the county of Norfolk. That it is an eaſier buſineſs to clean the crop by horſes, than by manual labour, we ſuppoſe, will not be diſputed; and, that a weightier crop may be gained from a regular planted field, than from one where it is phyſically impoſſible the plants ſhould ſtand at equal diſtances, we ſhould alſo ſuppoſe equally indiſputable. To the force of cuſtom, the prevailing practice can only be aſſigned; for in no part of Britain could they be raiſed at leſs expence, in drills, than in the ſoft, pliable, and eaſy-wrought ſands of Norfolk.

The folding of ſheep, at one period, when ſo much of the county remained in an unproductive ſtate, might, in all probability, be a very neceſſary practice; and the breed generally kept, undoubtedly poſſeſſes properties which eminently qualify them for this treatment. In the preſent improved ſtate of this county, it ſcarcely admits a doubt, but that ſheep of ſuperior qualities might be introduced; and, indeed, many farmers already prefer the Lincoln and Leiceſter breeds, as being cleverer feeders, and eaſier kept within the incloſures, than the original ſtock.

Lynn, *Yarmouth*, *Blakney*, and *Wells*, are the chief ports from whence grain is ſhipped in this county; and the value, in ordinary years, we are informed, amounts nearly to one million Sterling *per annum*. The value of the cattle, ſheep, lambs, &c. ſent out of the county, has been calculated at nearly four hundred thouſand pounds Sterling, in the ſame period; which is an aſtoniſhing produce from a diſtrict, the greateſt part of which is far from being naturally of a good ſoil, and affords a convincing demonſtration of the extent to which Britain is capable of being improved, providing the legal diſabilities, which preſently obſtruct it, were removed.

About *Lynn*, the ſoil is of a heavy nature, but rich, and carrying good crops, and, from the lowneſs of ſituation, numerous ditches, or open drains, are found neceſſary for carrying off the ſuperfluous water. The hundred of Marſh-land, which lies to the Weſtward of Lynn, is compoſed of a rich water-fat ſoil, (probably, a depoſit, in former times, from the ſea), but ſtands much in need of drainage.

Before

Before leaving this celebrated county, which well deſerves the attentive examination of every agriculturiſt, it is proper to notice the practice, recently introduced, of *dibbling* wheat. We did not find it to be upon the increaſe; and, from an examination of ſeveral fields managed in this way, it did not appear that the crops would be ſuperior to thoſe ſown in the broad-caſt manner. One of the chief advantages, viz. that of hoeing, was generally neglected; and the ſaving of ſeed, in the firſt inſtance, is compenſated by the extra expence attending the proceſs.

From *Lynn*, we came to *Wiſbeach* in *Cambridgeſhire*.—The whole of the land is of a marſhy deſcription, carrying fine graſs, and alſo corn, where it was tolerably drained. On entering Lincolnſhire, we found a continuation of the ſame rich ſoil; and, about Long Sutton, the natural quality is ſuperexcellent. Travelling on by *Holbeach*, *Spalding*, and *Sleaford*, we viewed the fineſt paſtures imaginable; and, where the plough was uſed, which was but ſparingly, the crops were equally good, unleſs in thoſe places where the Spring floods had occaſioned the ſeed-time to be too long delayed. There is an extent of ground, nearly fifty miles in length, of this kind of land, before we reached the dry upper parts of this county, through which the roads are uniformly made with ſand, digged from the ſubſoil of the adjacent fields; and this mode of repairing them, occaſions a heavy expence to the traveller. Perhaps, no tract in the kingdom is capable of ſupporting a greater ſtock, during the Summer months, than the one juſt examined.

Before our arrival at *Lincoln*, we paſſed through many barren heaths, and numerous rabbit-warrens. *Lincoln* is a large city, and the cathedral an elegant piece of architecture. We did not hear of any manufactures being carried on here; though the raw material being more plentiful in this county, than in any other part of the kingdom, led us to think the woollen manufacture might be ſucceſsfully introduced.

Leaving *Lincoln*, we found an extenſive common-field, all in fallow, at the very gates of the city, which appeared to have got two ploughings, and was carrying a ſtrong crop of thiſtles. Numerous flocks of ſheep were folded upon this fallow-field, which certainly gave fine encouragement for the poſſeſſors to clean the ground. It is no wonder, that ſo many Engliſh writers declaim againſt fallow; for, under ſuch management, as practiſed upon the field before us, the loſs of a year's rent, and value of the labour, would ſcarcely be compenſated by the ſuperior value of next year's crop.

But

But of all the fallow fields which came under our obſervation, one, a ſhort way from *Brigg*, was under the moſt wretched management. It was an extenſive common field, of good ſoil, but very foul, and had received only a ſingle ploughing, which was given by cleaving down the high broad ridges. To our utter ſurpriſe, though in the firſt week of July, the poſſeſſors were covering the quick weeds and thiſtles with dung; they had not ſo much as given it a harrowing; but with their three and four-horſe teams, were driving out the manure in all directions. We held up our hands in amazement at ſuch barbarous conduct: and one of my friends was for clearing the country of ſuch *Goths*, and tranſporting them at once to Botany Bay, where indeed many have gone, who were nuiſances to their country in an inferior degree.

The upper parts of Lincoln are crowded with theſe common fields, and they in reality entail ſhame upon its huſbandry. The improvements made upon thoſe lately divided, give the moſt convincing proof of the benefit attending the laying them in ſeveralty. At Barton upon the Humber, where a large common field was lately divided, we ſaw as well managed land as could be deſired. A Mr Graburn now poſſeſſes conſiderable portions of this field, which are well incloſed, carrying crops of excellent quality, clean, and in the moſt perfect order. It is a real pleaſure to examine ſuch management.

Croſſing the Humber from Barton, we landed at Hull, which is a populous town, and carrying on an extenſive trade to the Baltic, and other parts. From this place, we came up to the Eaſt Riding, by Beverly, to York, and were rather diſappointed with the country through which we paſſed. About Hull, the land is chiefly in grais, as is indeed a conſiderable proportion all the way to York. Some of the land is of a dry moorish kind, carrying heath and gorſe; and at the gates of York we viewed a common field of fine dry deep loam, which was in a condition not much ſuperior to thoſe already mentioned.

As the remainder of our route homeward was through the tract of country deſcribed in the firſt of theſe letters, it is unneceſſary to trouble you with our progreſs northward; and ſhall conclude with the following obſervations:—That, wherever we have found common fields, the huſbandry was uniformly bad, though in different degrees: That, wherever the land was poſſeſſed without a leaſe, its condition was

good or bad, according to the confidence repoſed in the proprietor: and, where held under that ſecurity, the management was generally good. In the grazing line, the Engliſh farmers may be conſidered as ſuperior to their Scotiſh brethren, though the latter will not loſe in compariſon, wherever the plough is introduced.

I am, yours, &c.

N.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Abolition of Tithes.

GENTLEMEN,

THIS ſubject having already attracted conſiderable notice in ſome of your preceding Numbers, I truſt to the impartiality you profeſs, that what I have now to remark, although perhaps differing in ſome degree from your own ſentiments, may, nevertheleſs, find a place in the Farmer's Magazine, which ſeems to be, of all other periodical works, the fitteſt for diſcuſſing this important queſtion.

Whether tithes ſhould be aboliſhed or not, may perhaps beſt appear from inquiring how they affect the intereſt of the parties concerned, who may be arranged into the following claſſes: *First*, The Proprietors of the ground which is liable in tithe: *Second*, The Clergy, whoſe revenue is at preſent payable from it: *Third*, The Farmers or Tenants, from whoſe crop and cattle the tithe is taken: *Laſtly*, The Community at large.

First, then, as to the PROPRIETORS. To me it appears, that their intereſt is ſtrongly affected by the tithe, and that they are particularly intereſted to get it aboliſhed, becauſe they do not get a fair rent for their land, or as much as it would otherwiſe bring, (excluſive of an equivalent to the clergy), were there to be no tithe drawn at all. My idea is, that were a farm, including the tithe, to be intrinſically worth 130l. a-year, and that the tithe itſelf amounts to 30l.; yet the proprietor, inſtead of getting 90l. of rent, as he ought, for ſuch a farm, would not get more than 80l., and not even ſo much; for, as the drawing of tithe in kind is always a haraſſing circumſtance, the tenant, in making his bargain, will have,

have, not merely a deduction from the full value of the farm, equal to the amount of the tithe, but alſo an additional allowance for the trouble and inconvenience he is put to, from the drawing of it in kind.

Second, With reſpect to the CLERGY, they are of all parties the moſt intereſted to ſee the tithe aboliſhed; for, of all modes of receiving their ſalaries, the moſt diſagreeable and vexatious muſt be that of gathering in the tithe in kind, the very quantity being altogether undefined, and continually changing from one ſpecies of crop, or of ſtock, to another; thus placing them in a ſituation in which they have hardly any alternative, but that of perpetually quarrelling with their flocks, or of ſubmitting to be cheated by them out of their lawful revenue.

Third, With regard to the FARMERS or TENANTS, I ſhould imagine, that theſe are rather more intereſted to retain the tithe, than to ſee it aboliſhed, notwithſtanding the outcry they make on the ſubject; for, if it be true, that the proprietor does not receive the full value of his lands, (excluſive of the allowance to the clergy on account of the tithe, which I ſhould think is indiſputable), it muſt follow, that what is thus loſt to him, will go into the pockets of his tenants. It is the exacting of the tithe in kind, which I take to be the chief cauſe, that, in England, the lands are not only lower rented than in Scotland, in proportion to their real value and produce, but likewiſe, as a natural conſequence of this, that the Engliſh tenantry are, in general, in more eaſy circumſtances than the Scotiſh tenantry are.

Laſtly, So far as regards the COMMUNITY at large. It has been urged vehemently, that tithe has an effect to prevent the improvement of waſte lands. If ſuch were really the caſe, tithe would, no doubt, in this inſtance, be prejudicial to the public intereſt. I am, however, inclined to ſuſpect, that the clamour on this point is altogether without foundation. Let us ſuppoſe land, in a waſte or unimproved ſtate, feeding geeſe, ſheep, or milch cows, (the uſual ſtock on an Engliſh common), and to produce to the value of 5s. the acre yearly, of which the titheman draws 6d. leaving 4s. 6d. to the occupiers of the ſoil. Now, ſuppoſing this land improveable, to the extent of yielding yearly 5l. the acre, of which 10s. would go for tithe—could the drawing of this tithe be a rational excuſe for not improving this land, when, inſtead of 4s. 6d. the acre, the cultivator would have 4l. 10s. to himſelf?

In like manner, I hold it to be a mere excuſe for indolence, to ſay that lands, already partially improved, cannot be fur-

ther meliorated, from the dread of increasing the tithe; for whatever addition is, in this manner, made to the income of the Church, the improver himself adds nine times the sum to his own. That lands highly adapted for alternate cropping, in pasture and in tillage, may be kept perpetually (to their loss) in the former state, is, in England, I believe, the fact, entirely on account of the tithe, which is more moderate in the one case than in the other; but, still, whatever bad consequences may ensue to the community from this property in the husbandmen, should not so much be imputed to the operation of the tithe, as to their obstinate mulishness, who, rather than the *parson* should derive any benefit from the *tenth* part of the improved produce, will deprive themselves of all the other *nine!*

I know, however, that much may be said on the other side of this question, and not a little declamation may be used against the clergy themselves, for "gathering where they did "not scatter, and reaping where they did not sow." But, leaving speculative opinion entirely to itself, I would fain know the fact. There are many estates and farms in England, and in every county in it, which are *tithe free*. Now, what I would wish to know, is this, Are these tithe-free lands universally, or even generally, better cultivated under every other like circumstance, but liable to tithe? This fact, as it may turn out, should go further towards conviction, than a whole volume of argument.

That tithes were abolished as completely in England as in Scotland, and the revenue of the English clergy (without diminution) were to be collected in as unexceptionable a manner as amongst ourselves, are circumstances, in my mind, very desirable. But the English farmer is not the party most concerned in the abolishing of tithe. Let him rather try to abolish some of his own practices, that are as much repugnant to good husbandry, and more within his reach. Let him abolish his own English fallow, (land left to *rest itself* both from crop and tillage). Let him abolish his broadcast; 5 *ton the acre* turnip; the plough with 5 horses in a line; and *the the plough with four* 8, *and stout men* 3; and (if one durst mention it) his notable practice of burning his hay, which this season has required no little dexterity to accomplish. But, alas! why should I advise him to all this? The tithe, already a grievous burden, being through these means *doubled*, would become insufferable!

A Scotish Farmer.

Mid-Lothian, September 5. 1800.

To

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

THOUGH the greateſt part of the following letter, from a ſervant of the Earl of Stair, written a ſhort time after the battle of Dettingen, to his friend in Ayrſhire, may appear rather incongruous with the general deſign of your publication; yet, as it was written by a farmer's ſon to a farmer, and contains ſome information relative to the ſtate of huſbandry in Germany, I hope it will procure a place in your next Number. I am,

Your's, &c.

N.

Hanau, July 20. *N. S.* 1743.

DEAR SIR,

I HAD the favour of your letter of the 5th April, a few days before the battle of Dettingen. I thought to have written to you by the meſſenger that carried the news to England; but I had neither time nor conveniency till it was too late. As you will have, long before this time, got the true relation of that affair in the newſpapers, I ſhall not take up your time with any accounts of it, farther than adding the abſtract of the whole killed and wounded on our ſide, which, I believe, you will ſcarce have got till this comes to hand.

Britiſh men, killed and wounded,	821	Horſes, 482
Hanoverians, ditto, - -	553	- - 71
Auſtrians, - - -	977	- - 50
	2351	603

The day after the battle, we marched to this place, where we continue. It belongs to the Prince of Heſſe, and lies on the river Mayne. The army is encamped between this and Frankfort. The French encamped for a fortnight on the other ſide of the river. About a week ago, they marched off, and left us this part of the country to ourſelves. We hear, they have croſſed the Rhine at Worms. The Marſhal Broglio has likewiſe left Bavaria with his army, and is croſſing the Rhine about the ſame place: ſome ſay, they are going back to their own frontiers. Prince Charles is following Broglio at the heels with his army; and, if your old maſter had

got his will, he would likewiſe have followed the Duke de Noailles with his army, and, I believe, would have given a very good account of them. But our Miniſtry are not blood-thirſty: moſt people here wiſh they had ſtayed at home *. The Emperor has declared himſelf neuter, and a peace is negotiating between him and the Queen of Hungary. The French are doing all they can to hinder it. The French miniſter at Frankfort aſſures the Emperor, that France will never lay down her arms till ſhe ſee him right; but it is every body's opinion, he will truſt himſelf no longer in their hands. The 20,000 Dutch are on their march to join this army; the laſt troops ſent from Britain are likewiſe on their march from Flanders, and expected here ſoon; it will be a fine army when they are all together——So much for news.

You flatter me with coming home a great man;—it is what I don't at all expect, and have as little thought of ſoliciting any thing from his Lordſhip. Since I have been refuſed advancement in his own family, I can expect nothing after that. M. —— and ſome more French rogues have the whole management of the family, under Captain D., whom his Lordſhip has never yet been able to provide for; by which you may ſee commiſſions are not ſo eaſily got. We had another French rogue for our maſter of horſe; but, on the day of the King's acceſſion to the throne, Lord Lowdon and he had ſome words about his managing of my Lord's horſes. That afternoon, the whole army fired three rounds on account of the day; and, after dinner, the Marſhal went, with all his attendants, to the camp, where his Majeſty was. Juſt as we were got out of the town, the maſter of horſe, who rode foremoſt, and Lord Lowdon next him, turned about to his Lordſhip, drew a piſtol, and deſired his Lordſhip to draw; which he refuſed, as being below his dignity to fight with a ſervant of my Lord Stair's; upon which the rogue let fly at, but, by good luck, miſſed his Lordſhip and all the company. He thought to get off to the French camp, but was ſoon diſmounted, and put in irons. He was ſet at liberty on the morning of the battle, with orders never to be ſeen about the family.—Your old acquaintance Cornet —— of my Lord's regiment, has got his place; ſo that nothing can happen that can puſh your friend D. higher than a valet-de-chambre. I wiſh with all my heart I had ſtayed at

* The Earl of Granville, Secretary of State, was then with the King.

at home at the weaver trade. Pray let me hear from you as oft as you pleaſe, with all the ſhire of Ayr news, and how affairs go on in Galloway; for I correſpond with nobody in that country. The knight of Lochnaw and his men behaved very gallantly;—poor Sandy Maxwell was killed on the ſpot. I do not know how G—— behaved, but he came off ſcart free; and young French was in the heat of the fire, and was not hurt. My kind ſervice to Mrs A——, and all your family; to Mr S——, if you happen to ſee him; and to honeſt A——, and all friends at Lowdon. Their Lord is made one of the King's aid-de-camps ſince the battle. On that day he acted as one of my Lord Stair's.

As I am writing to a farmer, which I had almoſt forgot, I muſt not end my letter without ſaying ſomething about the manner of labouring here. All I have ſeen of Germany is an exceeding fine country; the mountains are covered with wood,—the plains with all ſorts of excellent grain and fruit-trees. The grain they deal moſt in is rye and wheat, which they are now cutting down; but their oats and barley are very late. They have likewiſe a great deal of rape-ſeed and Indian corn, in great perfection. The ſoil is a light ſand, and conſequently eaſily laboured. Their plough is a very light thing with one ſtilt, and two little wheels which ſupport the end of the beam. It is generally drawn by one ox; ſome uſe two, who draw by the horns, which is certainly a far better way than ours. One man holds and drives the plough, and I have counted twenty of them in one field. By ſhifting the mould-board, they go up and down the ſame ſide.

We have deſtroyed as much corn this Summer, as would raiſe a famine with you, were the like to happen. We ſometimes camped in fields of corn as long as between the and Edinburgh, that would have covered the higheſt man in the army;—ſome they cut down to the horſes, and the reſt they trod under foot, which gave me a great deal of pain, not being uſed to that way. For theſe two weeks paſt, we have had a good deal of rain, and the weather is pretty cool.

When you are ſo good as to write to me, put your letter under cover to Andrew Mitchell, Eſq. at the Marquis Tweedale's office, Whitehall, London.—I am, moſt ſincerely,

Yours, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

WHOEVER has been in the habits of converſing with practical farmers, muſt have obſerved the univerſal complaint, that few farms can produce a ſufficiency of manure to go over the whole of their fallow-lands. This opinion is ſo generally adopted, that it is probable, nine tenths of the farmers of this kingdom are perſuaded that the evil is without a remedy. I therefore beg leave to offer the following hints to their conſideration; being convinced, from experience, that, wherever they are adopted, and properly purſued, the moſt beneficial effects will enſue.

A farmer may obtain an extra ſupply of manure, by being ſituated near the ſea-coaſt, and procuring ſea-ware, &c.; or, by being within a moderate diſtance of a large town, where he may purchaſe manure of different kinds—as ſtable dung, nightſoil, ſcrapings of ſtreets, ſoot, bones, tanners bark, &c.; but a cultivator, not bleſſed with ſuch local advantages, muſt look out for other reſources.

The firſt that occurs, is, watered meadows; which not only produce hay, without requiring any return of manure, but add greatly to the fertility of the adjoining fields, by the ſtock being carried into them every night, that are employed to conſume the Spring graſs and aftermaths. And it is not one of the leaſt advantages that the manure obtained in this manner, for laying upon the arable grounds, accumulates, ſomewhat like money put out to compound intereſt; for, whatever increaſe there is in the quantity of ſtraw, hay, or green crops, upon the uplands, by the increaſed manure from the watered meadows, will alſo increaſe the quantity of dung in the ſame proportion.

But it unfortunately happens, that this moſt advantageous ſpecies of improvement can only be adopted in particular ſituations where water can be had, and that of a proper quality; for there are ſome waters ſo much injured by mineral particles, as to be highly inimical to vegetation: this will be more particularly the caſe, in the vicinity of many ſpecies of coal-mines, where the waters are ſtrongly impregnated with vitriolic acid: But ſuch waters are confined to particular diſtricts, and are ſmall, in compariſon with thoſe of a more fertilizing

fertilizing quality. Water from calcareous ſoils is probably the moſt proper for vegetation; but this is not abſolutely neceſſary; for the Cheviot mountains, and hills towards the heads of Tweed and Teviot, are deſtitute of chalk or limeſtone, yet the waters iſſuing from them are highly fertilizing; and there is no doubt, that innumerable ſtreams are now running waſte, in many parts of the iſland, which might be applied with the greateſt advantage, and be a never-failing ſource for increaſing the quantity of manure for the arable lands.

The quantity of manure might alſo be very much augmented, by ſubſtituting drilled leguminous crops inſtead of naked fallows, upon lands adapted to the growth of thoſe ſpecies of grain. Every one allows, that the quantity of ſtraw from a good crop of beans, will make a much greater accumulation of manure, than they would have had, if the ſame land had been naked fallow; but then they will contend, that the ſucceeding crop of wheat will not be ſo good nor the land ſo clean, nor ſo well prepared, as if it had been naked fallow.—This objection is a very natural one from people who have been accuſtomed to fallow every third year, and have got, from habit, a prejudice in its favour: with ſuch people, nothing but experiment, or ocular proof, can be expected to make any change of ſentiment. I would therefore beg leave to recommend, that fair experiments be made; and, if properly conducted, I believe they will find their crops of wheat equally good as after naked fallow, and their lands equally clean.

But I muſt particularly obſerve, that when I ſpeak of drilled beans, it is not ſuch as are drilled at twelve or eighteen inches intervals, and hand hoed, but at thirty inches intervals, and horſe-hoed; being fully convinced, that upon ſtrong lands, and in dry Summers, hand-hoeing would be little more than ſkimming along the ſurface, while a proper formed horſe-hoe would penetrate, and completely remove the ſoil, from four to five inches deep, and much more effectually eradicate weeds, than it is in the power of hand-hoes alone to accompliſh.

Another ſource of raiſing manure, which may be practiſed upon every farm, and in all ſituations, is that of giving cut clover, vetches, or tares, to horſes, in the houſe, or ſheds, through the Summer-months; by this means, a conſiderable quantity of excellent manure is made, which would be in a great meaſure, if not totally, loſt, were the horſes ſuffered to depaſture

depaſture at large; the dung in the Summer months being moſtly conſumed by inſects. This beneficial practice is alſo attended with other advantages; a leſs quantity of land will maintain the ſame number, and the horſes thrive much better, as they ſooner get themſelves filled, and, of courſe, have more time to ſleep and reſt; and, by being in the ſhade, are freed from the plague and teaſing of flies.

This practice might, in ſome caſes, be alſo extended to cattle. In many parts of Germany, their oxen are kept conſtantly in the houſe, or ſheds, and thrive equally well with thoſe depaſturing at large.

A conſiderable loſs of manure ariſes from turning cattle out of the fold-yard, in Winter, to water or graze: it is a very miſtaken practice, and tends materially to leſſen the quantity, as well as quality, of the fold-yard manure, by the loſs of dung and urine, and treading, while they are thus out, in many places, for ſeveral hours a-day. Every fold-yard, if poſſible, ſhould have water brought to it, and the cattle never ſuffered to go out.

There are many diſtricts, where the above practices are unknown or totally neglected: to ſuch, I hope, theſe few hints may be of uſe. And am, &c.

C. ——.

Northumberland, August 25.

Fig. 2.

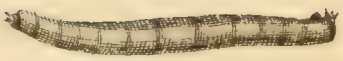


Fig. 1.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

THE very great damage occaſioned by the ravages of the grub, to the wheat and oat crops, ſown upon clover lea in the Spring of this year, made many people deſirous of knowing the ſpecies of fly, from which this deſtructive reptile originated. From thoſe that were opened in April and May, the embryo appeared to be of the beetle tribe; but, though this ſeemed probable, yet nothing certain could be determined from the appearance in ſo early a ſtage of its exiſtence. In order, therefore, to aſcertain the matter, I put ſome of them into a box with earth, and fed them daily with blades of wheat and oats, of which they ate conſiderable quantities, for five or ſix weeks, when they got into a dormant ſtate, and continued ſo till the laſt week in July, at which period

period the flies extricated themſelves from the huſk, and, to my great ſurpriſe, were of the *Diptera Claſs*, and of that ſpecies known in the North by the names of *Jenny Spinners*, or *Long-legged Taylors*, &c. &c.

The drawing, which I ſend you, (Fig. 2.) is made from one ſuppoſed to be a female, with a truncated tail. Thoſe which I conjecture to be males, have a ſharp-pointed tail like a ſting.

I alſo ſend a drawing of the grub, (Fig. 1.) of a medium natural ſize; they were from an inch to an inch and half long, of a brown greyiſh colour, having two ſtreaks of a lighter colour paſſing from the neck to the tail, about half way between the back and ſides.

Their depredations were moſtly performed in the night, when they came out of their holes, and fed upon the green blades of corn; and, not content with what they devoured on the ſurface, they frequently dragged their food into their holes along with them, to allay the cravings of their voracious appetites in the day time.

In ſeveral places, they were ſo very numerous, that the ſurface of the ground was comparatively as full of holes as a riddle, and ten or twelve of them would have turned up by a ſingle ſcrape with one's foot.

It may be proper to remark, that their deſtructive effects were principally upon ſtrong lands and moiſt ſoils: Sandy dry ſoils were perfectly free from them. A ſingular inſtance of this happened in a field of my own. A ſtrip of dry loam, about forty yards wide, ran diagonally acroſs the field, upon which the oats were not in the leaſt injured, nor any grubs to be found; but, upon each ſide of this ſtrip, the ſoil was a ſtrong marly clay loam. Here the crop was in a manner totally deſtroyed, as far as this kind of ſoil reached; and this with ſo much preciſion, that, in the latter end of May, thoſe parts of the field looked as brown as a bare fallow, while the crop, upon the dry loam, flouriſhed with the moſt luxuriant verdure. Many fields of wheat were ſo completely deſtroyed, as to be obliged to be ploughed up for fallow. Some were ſown with barley, which were alſo deſtroyed. The loſs by the ravages of this ſpecies of grub, was, this year, almoſt incalculable, and ſuch as no farmer living ever before experienced. I hope they will never ſuffer a ſimilar calamity. And am, &c.

J. B.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

IF the following obſervations on the practice of paring and carrying off the ſurface, for incloſing, and covering cottages, and other purpoſes, ſo common in the highlands and uplands of Scotland, appear worthy of notice, they may be inſerted in your next number.

Few practices are productive of equal miſchief, or call more loudly for redreſs, than that of paring and carrying away the ſurface, a practice almoſt univerſal in the highlands and uplands of Scotland, whole diſtricts being by that means rendered, in a great meaſure, uſeleſs for ever after, either for tillage or paſture. In every ſituation, however great its natural advantages may be, ſuch waſte and robbery of the ſoil induces a degree of poverty that can hardly be made up by the labour of ages. Accordingly, in England, where paring and burning has been practiſed to a very great extent, the ſoil has, in many inſtances, been reduced to a *caput mortuum*, notwithſtanding the plentiful uſe of the beſt manures afterwards; an evil that has now become ſo apparent, and is ſo well underſtood, that the practice is interdicted by many proprietors, under very ſevere penalties.

Paring and burning, however pernicious it may be, (and upon thin ſoils it is ruinous), falls greatly ſhort of the miſchief done in the north of Scotland. In the one caſe, a part, at leaſt, of the uſeful principles contained in the turf, is returned to the ſoil, by which means ſeveral good crops are obtained: in the other, the whole ſurface is carried off, and loſt to the ſoil for ever.

Thoſe who are able to eſtimate the extent of the injury that is thus produced, will view, with pain and diſguſt, the immenſe tracts that have been robbed of their ſurface, throughout a great part of the north of Scotland, where, in many places, only a few ſolitary tufts remain, to inform poſterity, that theſe waſtes, now ſo naked and deſolate, were once covered with herbage.

Were this deterioration of the ſurface a matter of neceſſity, an excuſe for the practice would ariſe out of that neceſſity. Even as it is, were the ſoil, of which the ſurface is thus deprived, afterwards applied to any uſeful purpoſe, ſomething might be ſaid in favour of the practice. No

ſuch

ſuch alleviation can, however, be produced. When uſed for cottages, the wretched hovels, conſtructed with ſeal, exhibit an appearance impreſſive of nothing but miſery in the extreme; nor is their interior more comfortable. Perhaps, none, but thoſe who have ſeen theſe cottages, would credit the deſcription: taken altogether, they convey an idea of dirt and wretchedneſs, little ſhort of what is met with in the caves and earthen hovels of the Eſquimeaux. The walls abound with inſects and vermin of every deſcription; and, by continually crumbling down, keep every part of the hut covered with duſt, and give it a moſt intolerable ſmell. The appearance, by fire or candle-light, is of the gloomieſt nature, and ſuch as it is impoſſible to aſſociate a ſingle idea of comfort with. This is the caſe, only where the walls are made of turf. When the roof is conſtructed of the ſame materials, the matter is ſtill worſe; for, along with the circumſtance of its being unable to defend even a ſlight ſhower, the inhabitants are annoyed with vermin, and bits of the decayed ſoil, perpetually dropping down upon their perſons, their beds, and even into their victuals. It will, no doubt, be obſerved, that cuſtom has reconciled them to ſuch habitations, and that they do not feel theſe uncomfortable circumſtances in the ſame degree with people who have lived in cleaner houſes from their infancy. Good and bad are, no doubt, comparative ideas; and the mind, accuſtomed only to a habitation capable of affording ſhelter from the inclemency of the weather, does not, without having ſeen ſomething better, carry its ideas beyond it. This, certainly, is the caſe with the inhabitants of the north, in their early years, and while they remain in their native diſtricts; but, when they grow up in life, and viſit other parts, they appear fully ſenſible of the comfort of clean warm habitations, and, on many occaſions, expreſs a lively regret at the compariſon between their own wretched hovels, and the clean comfortable cottages met with in the ſouth.

Where the happineſs and *comfort* of that numerous and valuable claſs of men are conſidered as objects worth attending to, (and humanity, as well as ſound policy, require that they ſhould have every poſſible pains beſtowed upon them), the circumſtances mentioned cannot fail ſeriouſly to impreſs every humane proprietor. To ſuch, the pleaſures ariſing from improving the condition of ſo many of their fellow-creatures, will be a rich gratification; but, when that is coupled with motives of a different nature, immediately connected with their

their own and the public intereſt, no additional ſtimulus ſeems neceſſary.

A hut or hovel, ſuch as has been deſcribed, is erected with greater labour, and perhaps expence, than would be required to build one with ſtone, and cover it with thatch or tiles. A great deal of ſoil, that might be rendered productive, is deprived of its ſurface, and either entirely deſtroyed, or very much injured, in procuring the materials. After all, the habitation is an uncomfortable one, and does not laſt a tenth part of the time that one conſtructed of ſtone and lime uſually does.

The caſe is the ſame with fences made with this material. Theſe, in their moſt perfect ſtate, never look well, and are, for the moſt part, found very unequal to the purpoſes of confining either ſheep or cattle, or even of protecting corn crops. They are affected by every circumſtance of the weather: moiſture eaſily penetrates them; froſt, in that ſtate, ſwells, burſts, and throws them down. A Summer ſun acting upon an earthen fence, that has been thus ſwoln, and rendered looſe by froſt, parches, and cauſes it to moulder down. Its perpendicular ſurface is, by that means, loſt; the fence becomes a ſloping bank, and muſt then be either completely rebuilt, or the incloſure abandoned.

In the Highlands, and indeed over the greateſt part of the north, there are at preſent many thouſand fences of this deſcription, that are now nothing but banks and mounds of earth; which, though they are no longer uſeful as fences, and though the fields from whence they were originally taken, continue to reproach the occupier, no attempt is made to render them uſeful, or repair the injury done, by carrying them off. The ſame blameable neglect prevails in regard to the ruins of their houſes, it being by no means an uncommon thing to ſee the roofs fallen in, and the decayed walls ſtanding, of whole groups of cottages, which, with a ſmall degree of labour, might be converted into excellent manure; it being now well aſcertained, that when turf has been uſed even for fences, and remained in that ſtate for a year, or even for a few months, it is found to have acquired fertilizing properties, partly by the decay of the vegetable ſubſtances it originally contained, and partly by abſorption from the atmoſphere. Witneſs the good effects of fold-dikes, when uſed in that way.

When turf is uſed for conſtructing the walls of cottages, ſtables, &c. it is found to have acquired very high fertilizing powers,

powers, being richly impregnated with animal effluvia, and other matters. With this knowledge of its valuable properties, it muſt appear ſtrange to ſee the materials of ſo many decayed fences, and ruinous cottages, lying in heaps all over the north, which might be rendered ſo valuable with little trouble, and almoſt without expence.

To convey ſome idea of the nature and extent of the miſchief ariſing from this practice, it is only neceſſary to notice the component part of the ſoil thus taken away. In all ſituations where land has been long undiſturbed by the plough, the ſurface is found to conſiſt chiefly of vegetable earth, ariſing from the annual decay of the leaves and other parts of the plants growing upon it: Theſe falling down and rotting yearly, in proceſs of time form a ſoil, whoſe principal conſtituent part is vegetable earth, and which, under proper management, is the beſt of all ſoils. If this is admitted, it muſt follow, that, upon waſte lands, or even lands of a better quality, the preſervation of the ſod is an object of the firſt importance; and that every attempt to *pare*, *burn*, or *carry it away*, for whatever purpoſe, ought to be ſtrictly prohibited. In many inſtances, the miſchief already done upon thin ſoils is ſuch, as muſt for ever prevent their improvement.

Even in diſtricts where agriculture is pretty well underſtood, and where improvements have made conſiderable progreſs, it is no uncommon circumſtance to ſee the proprietor or occupier carrying away the ſurface of the field he is incloſing, to build the dikes, leaving little behind, in many places, but gravel or rock. Were the miſchief ariſing from this practice out of the queſtion, one would be tempted to ſmile at the abſurdity of laviſhing ſo much trouble and expence in erecting a temporary fence to incloſe fields, the future improvement of which is, in a great meaſure, if not entirely, defeated, by paring and carrying off the moſt valuable part of the ſoil. What adds to the folly of the practice is, that every purpoſe for which turf is now uſed in theſe diſtricts, may be anſwered much better by other materials that can be had upon the ſpot. Stones are every where plenty, and may be applied, with advantage, to the building of cottages and dikes; and, where ſtraw is ſcarce for making the roofs, heath may be obtained in abundance, without any other expence than the trouble of cutting, which, when properly laid on, forms a very comfortable and laſting covering, both for cottages and ſtables. In this place, it is impoſſible to paſs over a circumſtance, which almoſt exceeds belief, viz. that in moſt

caſes, where ſuch incloſures are making, and where many people are employed in paring the ſurface, immenſe quantities of ſtones are left in the field; the removal of which would anſwer the double purpoſe, of forming a laſting and uſeful fence, and clear the land of a nuiſance, which, in all caſes, ought to precede any attempt to bring it under the plough. Another practice remains to be noticed; that of paring their beſt paſtures, and mixing the turf with their dung, to make what is called feal-muck. The numerous heaps of earth formed by decayed cottages and fences, have already been noticed; indeed, there is ſcarce a farm where ſome of them are not to be met with: the valuable qualities of turf and clay, after having been uſed for ſuch purpoſes, have alſo been noticed: common ſenſe, it might be ſuppoſed, would naturally point out earth of that kind as preferable to freſh ſod; yet, ſtrange to tell, in place of being applied to a purpoſe for which it is ſo well adapted, it is left in a neglected ſtate, and an additional proportion of land deprived of its ſurface, to anſwer the ſame end.

This being in ſome degree a new ſubject, the ſtrictures upon the practice will no doubt be unfavourably received by the tenants and cottagers in the diſtricts where it is followed. Men, wedded to particular cuſtoms, are with difficulty brought to think, that they and their anceſtors have ſo long followed a practice at once hurtful to the country and themſelves: in this, as in many other inſtances, the united powers of habit and education form an obſtacle too powerful for reaſon to remove, and which is proof even againſt the moſt convincing experiments. Theſe obſervations, however, are not addreſſed to minds of that deſcription: upon the enlightened proprietors in the North, they will have all the effect that could be wiſhed: and, though they may not, with all their knowledge, be able to reaſon their tenants out of their prejudices, they have it fully in their power to alter their practice; which, it is hoped, they will be able to do at no diſtant period.

A. Z.

Fig. 1.

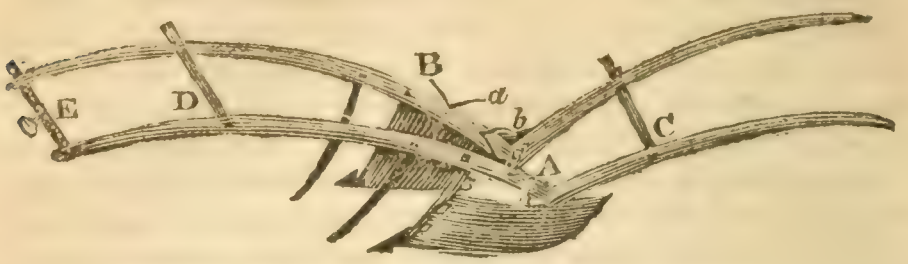


Fig. 2.

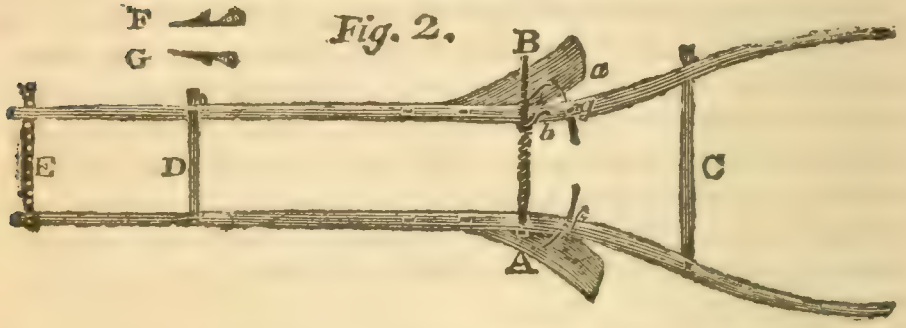


Fig. 3

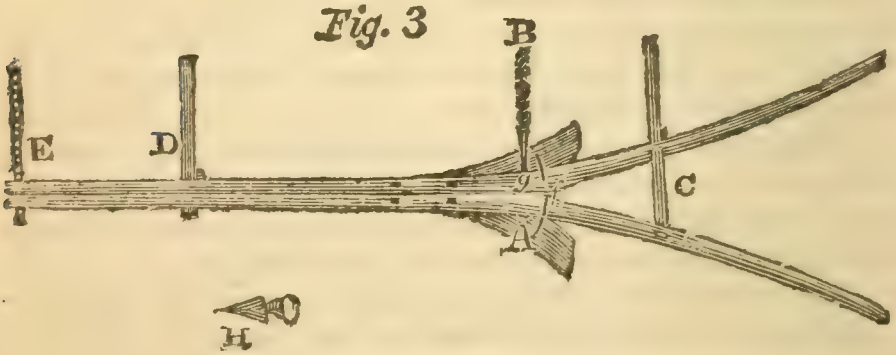
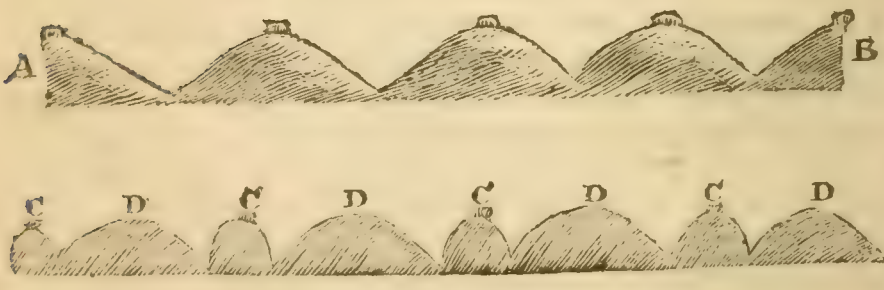
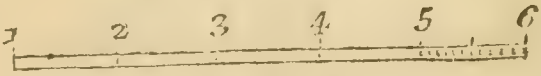


Fig. 4.





Scale of Feet.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Deſcription of a Plough for Cleaning Turnips.

GENTLEMEN,

I KNOW not whether it falls within your plan, to give plates of uſeful inſtruments in agriculture, or of ſuch as are not generally known. To diſſeminate the knowledge and uſe of improved utenſils, muſt conduce very much to the progreſs and advancement of agriculture; but of many it is not eaſy to give ſuch accurate deſcriptions as can be perfectly underſtood, without the aid of drawings. There is a plough in *pretty general* uſe in Roxburghſhire, in the culture of turnips; a deſcription and drawing of which I have not ſeen in any agricultural book which has fallen in my way. In hopes that it might be agreeable to your plan to inſert it, I have attempted the following deſcription and ſketch of it. The advantage is well underſtood, of going round each drill of turnips with the plough, and *taking the earth from* the turnips, previous to their being hand-hoed. This plough is conſtructed to *take the earth* from both ſides of the drill at once, and alſo to ridge or *ſet up* the turnips again.

It conſiſts of two ploughs, of a ſmaller ſize than the common plough, each of them without the ſmall ſtilt or handle, but joined together with bars of wood and of iron; by means of which, the two ploughs can be fixed at any required diſtance from each other, when uſed in *taking the earth from* turnips; and when the two are brought cloſe together, they then form a common double mould-board plough, for going betwixt the drills, and ridging them up.

Fig. 1. is a view of the plough, when ready for taking the earth from turnips, as it appears to a perſon ſtanding on one ſide, and towards its front. Each beam has its ſeparate coulter and feathered ſock. A B is a pretty ſtrong rod of iron, formed into a ſcrew, in the greateſt part of its length; which, being firmly fixed to the left-hand beam at A, paſſes through the other beam, to which it is fixed by means of two nuts with handles, which, ſcrewed firm on each ſide of this beam, fixes the two at any required diſtance. C and D are

two bars of wood, (ſometimes of iron), fixed in like manner to the left-hand beam, and paſſing through the other, where they are fixed by means of wedges. E is a bar of iron, alſo paſſing through both beams, with holes in it for the purpoſe of fixing the bridle by which the plough is drawn. The mould-boards are fixed to the ſheaths by hinges, and are placed at any required width, by means of two iron pins, *f* and *g*; which, going down through the beams, paſs through holes in a thin bar of iron fixed to the inſide of each mould-board. F and G are the two feathered ſocks. Fig. 2. is a view of the ſame, as ſeen from above; in which, the way of altering the mould-board is more diſtinctly perceived. The plough, when uſed in this way, is drawn by two horſes. Fig. 3. is a view of it from above, when the two beams are brought cloſe together, and they form one double mould-board plough; the coulters are then taken out, the two ſocks taken off, and the ſock H put upon the points of both the ſheaths, which cleans the bottom of the furrow betwixt the drills, and keeps the two ſheaths firmly together. It is now drawn by one horſe.

Fig. 4. is a rude ſketch of a ſection of the drilled turnips; A B their form before the turnips are cleaned.

C C C C their form when the earth is taken from them with this plough.

D D D D is the ſoil taken from each ſide of the drill, and formed by this plough into a ridge in the bottom of the former furrow. When placed together, for ſetting up the turnips, it goes in the middle of this ſmall ridge, and lays back the ſoil to the roots of the turnips.

When the common plough was uſed, it went firſt along the one ſide of the drill, and then the other; and, being too wide, it laid the ſoil too much upon the ſide of the drill.—It will be ſeen at once, that this plough does double the work of the common one.

I underſtand they are ſometimes made with other two moveable mould-boards, which hang on by hooks, when the two beams are ſeparated, as in fig. 1. and 2.; and it then will alſo ſet up two drills at once: but, in this caſe, they require two horſes, and are made ſtronger.

They are alſo often ſtrengthened by a bar of iron going diagonally from the hinder end of one beam to the fore part of the other, and which is fixed by a ſcrew and two nuts, as the rod A B, in fig. 1. and 2. I am, &c.

S. E.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

I HAVE perused with satisfaction, and not without instruction, the three first Numbers of your Magazine; which, if it continues to be conducted upon the principles laid down in the introduction, promises to be useful to the agricultural interests of Britain. No part of the work is entitled to more credit, or appears to be drawn up with more judgement, than the last Quarterly Reports of the state of our agriculture: these undoubtedly are derived from the best sources, and convey a faithful detail of the state of the several districts mentioned. I say this, not from the perusal of your correct and accurate account, but from ocular evidence in many cases, and the best information in others.

It is, therefore, with a mixture of indignation and disgust, that I have lately perused the paragraphs inserted in many of our newspapers respecting the state of the crops, and the future prospects of the country with regard to provisions. At a pretty advanced period of the present year, vegetation was so backward, that farmers of the best judgement did not expect the harvest would be earlier than last year; and certainly nothing short of the uncommon and long continued heat and dry weather, during the months of July and August, could have shortened the period of our expectation, or altered the prospects of the country. About four weeks ago, owing to the early part of the crop having whitened (it would be absurd to say ripened) prematurely, and the rest advancing rapidly to the same state, there was, till the late rains, every appearance of an early and a general harvest. At that time, the newspapers, without attending to the circumstances that had gone before, inquired, "what had become of the predictions of those who foretold that the harvest would be a late one, and the grain ripened under all the disadvantages of a declining sun?" Had the Editor of the paper, or the Author of the paragraph, looked back at the period at which the observation was made, and calculated the probable chances in favour of its fulfilment, the inquiry would have appeared unnecessary: Experience, dearly earned, indeed, to the country, affords a distressing proof, how far even a week of bad weather may alter the most flattering prospects; for, though we can now reckon five weeks

ſince the commencement of our harveſt, four fifths of the crop remains uncut, and ſo much altered, both in quality and appearance, as to be incredible to any but thoſe who have been daily and attentive obſervers of the injury.

In another paper, notice is taken of the account given of the wheat crop, which is ſtated as not exceeding two thirds of an average crop; a ſtatement, ſays the editor, given for the expreſs purpoſe of aiding Foreſtallers, Regraters, &c. Were ſuch obſervations only to find their way into the beſt-informed circles, no miſchief would ariſe from them; as good ſenſe, aided by better knowledge, would form an antidote to the poiſon: But when it is conſidered what a wide range newſpapers now take, and that they are peruſed even by the loweſt orders of the community, who, from their ignorance, and the want of other information, are unable to detect the fallacy of the ſtatements held out, and whoſe reſentments are quickened by their neceſſities; the propagation of ſuch ſtatements ought not to be pardoned, upon the plea of miſinformation, or defect of intellect, but ſhould be viewed as offences againſt the peace of ſociety, and puniſhed accordingly. Every village has its weaver, cobler, or tailor, who reads the newſpapers to an ignorant audience, and explains the different paragraphs, in a manner calculated to produce the moſt baneful effects.

To what is the ſpirit of diſcontent, unforfunately ſo prevalent in many parts of the iſland, on account of the ſcarcity and high price of proviſions, owing? The anſwer is ſhort—to newſpaper miſrepreſentation. My ſituation in life affords me more than common opportunities of intercourſe with the lower orders of the community; amongſt whom, eſpecially in towns, I have beheld the moſt complicated ſcenes of miſery and diſtreſs, for many months paſt, notwithſtanding the unequalled exertions that have been made by the ſuperior ranks to relieve them. Upon many of theſe occaſions, where I have met with wretches deſtitute of the moſt common neceſſaries, my compaſſion has given way to a degree of indignation, at obſerving, that, in conſequence of the miſrepreſentations daily propagated through the medium of newſpapers, theſe poor ſuffering creatures have been taught to believe, that a calamity, owing entirely to a ſevere diſpenſation of Providence, was occaſioned by the avarice of farmers and foreſtallers. Upon ſuch occaſions, I have attempted to deſtroy the idea, by calling

to

to their remembrance the long ſeries of diſtreſſing weather that had occaſioned the deficiency of the crop. The uniform anſwer was, Look at the newſpapers; ſee what fine crops they have in England, and elſewhere; and hear what is ſaid about foreſtallers. It is in vain that I tell them, the authors of the paragraphs they lay ſo much ſtreſs upon, are, many of them, ſo groſsly ignorant of country affairs, as to be unable to diſtinguiſh a horſe from an aſs, or a ſheep from a hog; and that the editors, in order to fill up a corner, take any thing that is offered them; and, rather than want materials, will inſert an old ballad, or an extract from Satan's Inviſible World, or Pilgrim's Progreſs. My arguments, however, are for the moſt part unavailing, and very unequal to the taſk of combating the ſtrong plea of hunger, ſharpened by falſe and poiſonous ſtatements.

Laſt year, a ſeaſon that will long be memorable in the annals of our hiſtory, at the commencement of the harveſt, the newſpapers announced a plentiful crop, and held out the moſt flattering proſpects of cheap and wholeſome Winter food. The ſqualid looks, and emaciated bodies, of thouſands of half-famiſhed human beings, by deſtroying the credit of theſe aſſertions, ought, in my humble opinion, to have ſerved as a caveat to thoſe concerned, or at leaſt dictated a more prudent conduct in future. The ſcarcity of laſt crop, by its formidable appearance, became the ſubject of national inquiry, at a very early period of the ſeaſon; and the labours of the Committee of the Houſe of Commons, aided by the opinions of thoſe who had the beſt opportunities of information, in every diſtrict throughout the kingdom, eſtabliſhed, beyond diſpute, that the ſcarcity and high price of grain were owing entirely to a deficiency in the crop, which, in a number of caſes, was one third ſhort of an average, in others, one half, and, in not a few inſtances, it had entirely failed.

Amongſt others, I had the honour of being applied to upon the ſubject, and was deſired to ſtate what I thought the probable cauſes of the ſcarcity, and the means of preventing a ſimilar calamity in future? The only anſwer I could make, (and it was founded upon a perfect knowledge of the diſtrict in which I reſide), was, that the ſcarcity was a real one, occaſioned by the long-continued bad weather, during the *Seed-time*, *Summer*, and *Harveſt*; an evil that lay beyond the power of man to prevent, and which could only be mitigated, in future, by the ſtricteſt attention to our national agriculture, and bringing an additional number of acres under

the plough. If the above conveyed a faithful ſtatement of one of the richeſt and beſt cultivated counties in Scotland, and the one I mention holds the firſt rank, what diſtreſſing accounts muſt have been received from more diſtant and leſs fortunate diſtricts; in many of which, to my certain knowledge, the crop was either entirely loſt, or fit only for giving to horſes or cattle. The notoriety of theſe facts puts the matter beyond a doubt, and, in the minds of well informed men, muſt outweigh the ignorant aſſertions (not to call them by a worſe name) of newſpaper ſcribblers.

It is, however, upon the latter part of a crop that has been the ſubject of ſo extenſive and impartial an inquiry, and has been declared deficient by the moſt reſpectable authority, that the miſerable ſufferers, in place of being taught to bear their hardſhips with reſignation, and to conſider them as the chaſtiſement of a Supreme Being, for ſome cauſe to us unknown, —have been induſtriouſly told, that there is no ſcarcity, and that their miſery is owing entirely to the machinations of avaricious men. Let thoſe perſons, who have been ſo aſſiduous in circulating ſuch ſtatements, and who unqueſtionably have rendered the cup of miſery ſtill more bitter by their doctrines; I ſay, let them look around, and bluſh, when they view the exertions that have been made, to leſſen the public calamity, by the very perſons whom they have loaded with reproach, and expoſed to the fury and reſentment of an ignorant and ſuffering multitude. The farmers, whom they have falſely accuſed of hoarding up their grain, have, throughout Scotland, exhibited a degree of compaſſion and benevolence heretofore unequalled; having voluntarily come forward, inquired into, and relieved the wants of all around them. If the newſpaper accuſations are true, a ſtatute of lunacy ought immediately to be applied for, againſt a body of men, who, at the ſame time that they are hoarding the neceſſaries of life, with a view to enhance their price, are gratuitouſly feeding the very people who are the principal conſumers of theſe articles. The thing ſpeaks for itſelf; and, were the ſubject any other than a matter of the higheſt importance to the peace and comfort of ſociety, I ſhould not employ argument againſt ſuch wretched abſurdity.

With regard to foreſtalling, regrating, &c. the inſtances in which they are practiſed are ſo few, as to be unworthy of notice, when applied to a general ſcarcity over a great kingdom. But, were they more numerous and extenſive, we certainly

tainly have laws to repress them: and the observations upon the subject, in almost every newspaper, can be considered in no other light than a libel upon these laws. They have industriously sounded the alarm from one end of the island to the other; they have rode in *the whirlwind, and directed the storm* of all the tumults and outrages that have attended the present calamity. Let them recollect, that, upon another occasion, an occasion that will occupy a conspicuous place in the annals of our history, a poison, that threatened the very existence of the country, was also propagated through the same medium; I mean, the levelling or seditious principles with which the country lately teemed. From the beginning of that phrenzy, up to the time that the deputies were arrested at Edinburgh, their sentiments were propagated in the form of advertisements, and encouragement held out to the ignorant and turbulent, in all parts of the country, to unite in what was termed the common cause. The frequency of these advertisements, and the apparent impunity with which they were inserted, gave life to sedition, and rendered the principal actors bold: and it was not till the imprisonment of these men, and the whole kingdom had been set in a flame by their means, that the newspapers began to perceive they had done any thing that was either *morally* or *politically* wrong. You will pardon this digression, Gentlemen; but it appeared to me a case in point, and I could not omit taking notice of it. Indeed, I am the more induced to do so, as, should the present unfortunate circumstances continue, and another bad year or two be added to the past, the tempers of the lower ranks of society may be rendered so irritable, by a continual series of misrepresentation, as to produce scenes of anarchy and distress, beyond what any person can calculate upon.

It is not unworthy of notice, how far, in the heat of declamation, these warm friends of humanity forget a proper definition of terms, including, under the opprobrious names of forestaller, regrater, &c. every person who has any dealings in grain or provisions, without considering that many of the most extensive and populous districts in Scotland, and, indeed, in many other parts of the island, would have been absolutely famished, but for the exertions of corn-merchants. What would have been the situation of Edinburgh, Glasgow, nearly the whole of the west, and many parts of the north of Scotland, without their assistance. It is notorious that they would have been without bread for many months, had they depended solely upon the produce of their immediate neighbourhood.

I have always been a decided enemy to *monopoly* of every kind, particularly of the neceſſaries of life, and think the practice of buying up grain the produce of any diſtrict, and reſelling it in the ſame place, at an advanced price, is highly cenſurable, and deſerves puniſhment. Fortunately for the credit of the country, few ſuch inſtances are met with: if any ſuch do exiſt, the laws are adequate to their puniſhment. Very different is the idea that ought to be annexed to the character of the reſpectable corn-merchant, who either imports his grain from foreign countries, or purchaſes it in diſtricts at home, where more is raiſed than the wants of the inhabitants require; and, by carrying it to other diſtricts where it is ſcarce, circulates it equally, and eſtabliſhes a balance over the whole country; preventing alike the diſtreſs ariſing from ſcarcity in one place, and the waſte which ſeldom fails to attend plenty in another. If the regards of ſociety are proportioned (as in all caſes they ought to be) to the benefit derived from the exertions of meritorious individuals, the corn-merchant, ſuch as I have deſcribed him, in place of being ſtigmatized in the manner he has lately been, is entitled to the gratitude of his fellow-citizens. In concluſion, I have only to add, that, when I buy a newſpaper, the money is given for the articles of intelligence it contains, and not for the unfounded ſtatements, or childiſh comments, that are tacked to the tail of moſt of them. I have no objection to the editor, with all his faculties, both of body and mind, lulled into harmony by his dinner and a few glaſſes of wine, warming his backſide at the fire of his printing-office, and, with his eyes ſhut, fancying a fairy ſcene, where every thing breathes the moſt unbounded plenty. The idea is pleaſing: let him indulge it. Would to God it could be realiſed in this country at preſent! But let him take care, in times ſo diſaſtrous as theſe, not to publiſh ſuch viſions as real pictures. Like the Arabian Tales, they will be believed only by weak or ill-informed minds: with thoſe of another deſcription, they will be ſcouted, and the author deſpiſed. Having never bought a boll of grain in my life, but for ſowing or feeding my horſes, and never ſold any but the produce of my own land; and, having no connection with, nor intereſt in, the tranſactions of any dealer in grain, I can with truth ſubſcribe myſelf,

No Forestaller.

Sept. 12. 1800.

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

General View of the Agriculture of the County of Northumberland: with Obſervations on the means of its Improvement. Drawn up for the conſideration of the Board of Agriculture. By J. Bailey *and* G. Culley. 209 *pages*, 8*vo*. *Sold by* Meſſ. Robinſon *and* G. Nicol, *London*; Bell, *Newcaſtle*; *and* Symington, *Edinburgh*,

(Continued from p. 318.)

We have already given our opinion of five chapters of this uſeful Report, and proceed with pleaſure to examine the remainder.

The ſixth chapter treats upon that neceſſary branch of improvements, '*incloſures*.' In p. 65. we find the following valuable obſervations upon the moſt proper way of training up young hedges:

'It is a cuſtom, in ſome parts, to clip young quicks every year; this makes the fence look neat and ſnug, but it checks their growth, and keeps them always weak in the ſtem, and, when they grow old, open at bottom; while thoſe that are left to nature, get ſtrong ſtems and ſide branches, which, by interweaving one with another, make a thick and impenetrable hedge, and if cut at proper intervals, (of nine or ten years), will always maintain its ſuperiority over thoſe that have been clipped from their firſt planting. In point of profit and of labour ſaved, there is no compariſon; and, for beauty, we prefer nature, and think a luxuriant hawthorn, in full bloom, or loaden with its ripened fruit, is a more pleaſing, enlivening, and gratifying object, than the ſtiff formal ſameneſs produced by the ſhears of a gardener.'

In

In the chapter upon "arable land," we have a clear detail of the ſeveral articles of Northumberland tillage, from the fallowing of the ground till the rotation is finiſhed. It would appear, that the practice of naked fallows is rather on the decline, and that drilled leguminous crops are now ſubſtituted in its place. While we are fully convinced that naked fallow can never, with advantage, be wholly laid aſide upon the heavy ſoils, we cordially concur with the authors, that, with proper attention to cropping, the quantity may be very much reduced. But let them ſpeak for themſelves—

'Whether fallowing is or is not neceſſary, has been much agitated of late years; ſo much ſo, that the different partizans have obtained the appellation of '*fallowiſts*,' and '*antifallowiſts*.' It happens to be one of thoſe ſubjects, which can never be determined by reaſoning, opinions, or bold aſſertions: *fair experiments* only can reſolve it: and whatever be the reſults of ſuch experiments, in any particular place, it may be juſtly concluded, they will be the ſame in ſimilar ſoils, climates, and ſituations.

'Though we are diffident in giving a decided opinion upon ſo important a ſubject, yet, from obſervations made on the above facts, we cannot help being inclined to think, that the quantity of naked fallow might be very much reduced, and, in another century, will probably be totally aboliſhed, if no fortuitous circumſtances ariſe, to check the exertions and ſpirit for improvement, which have been ſo prevalent of late years, and ſo generally diffuſed through this diſtrict.'

The information contained in the following paragraph, (p. 77.) has been amply corroborated by what we have practically experienced. Of laſt unfortunate crop, the ſmooth-chaffed wheats were 20l. per cent. ſuperior to the other varieties, in reſpect of quantity and quality.

'The downy-chaffed wheats have ſhorter ſtraw, and are leſs liable to have the grain ſhaken out by winds, (the chaff embracing the grain more cloſely), than the ſmooth-chaffed tribes, which is a conſiderable advantage; but then we are apprehenſive that this downineſs makes them retain the dews and moiſture upon the ear, much longer than the ſmooth-chaffed kinds, and probably renders them much more liable to be affected by thoſe diſeaſes, which give a duſky dark ſhade to the chaff, and a ruſty cankering upon the ſtraw: As we recollect few inſtances of ſmooth chaffed, or red wheat, being

being troubled with the diſeaſe; of courſe, the downy-chaffed kinds are moſt proper for windy, open ſituations, and the ſmooth-chaffed to well ſheltered incloſed diſtricts.'

In the account of Angus oats (p. 89.) we ſuſpect that a miſtake is committed. This variety is ſaid to produce more ſtraw than the common oat, which we have never found to be the caſe. So far from that, we judge that the latter, upon the ſame field, will exceed the other in bulk, at leaſt one ſixth. If the obſervation had applied to the grain, it would have been well-founded, as Angus oats are undoubtedly more prolific. With regard to the time of ripening, they appear now, from being naturalized to the climate, to come earlier to maturity, and in a more regular way, than when firſt introduced.

The drilling of beans is moſt judiciouſly recommended. Sowing this grain broad-caſt, is certainly, in general ſeaſons, attended with the moſt pernicious conſequences. In fact, drilling and horſe-hoeing beans, upon heavy ſoils, has been attended with equal advantages, as are produced by turnips upon the light ones.

We decidedly coincide with the authors, that potatoes can never be uſed with profit, in the feeding of cattle: a few of them, however, may be uſeful for carrying on ſtock in April and May, after the turnip crop is finiſhed. Potatoes do not admit the land to be ſo well cleaned as turnips: They are planted too early, for getting the ground ſufficiently worked; and their after culture muſt be concluded at an early period of the ſeaſon. We hardly ever ſaw a potato field completely cleaned: witneſs all the fields in the vicinity of great towns, where potatoes are the chief fallow crop.

A curious and intereſting hiſtory of drilled turnips is given, (p. 106.), which is too long to be inſerted here, but ſhall afterwards be taken in by way of "Extract." It appears that, when originally introduced into Northumberland, they were ſown broadcaſt; and that the firſt perſon who ſowed them, having much to do, was obliged to *ride* and *ſow*, that he might diſpatch the greater quantity!

We are glad to notice, (p. 133.), that "the commons in this county, capable of being converted into profitable tillage, are now very trifling, the greater part having been incloſed within the laſt thirty years." The advantages attending this proceeding, are detailed in the following manner:

"*The*

" *The advantages* arising from inclosing of commons, in respect to the *improvement of stock*, is obvious, when it is considered that, while in a state of common, every one turns on what he pleases, and there is generally double the quantity of stock that there ought to be: the consequence is, they make no improvement; *they barely exist*. Should an enlightened breeder wish to improve his sheep, how is he to effect it, while his ewes mix promiscuously with his neighbour's flocks? If he had the best tup in the kingdom, can he be sure that one of his ewes would be tupped by him, while there are probably not less than a score of his neighbour's to contest the female with him? On the other hand, if the common were inclosed, every one would stint with that species of stock for which his allotment was best adapted, and in such numbers as would insure profit. When he can confine his ewes within his own inclosure, he can make whatever experiment he pleases, by putting a few, or many ewes, to any particular tup, without any fear or apprehensions of having a spurious breed, by the interference of his neighbour's. He is also enabled to keep his flock from many disorders. Few commons but have some tracts of land liable to the rot. How are they to be prevented from depasturing on it? Or, if the scab, or other infectious disorders, have taken place amongst any flock on the common, how is he to avoid it?"

The authors are friendly to paring and burning, and their opinion upon the subject (p. 137.) is so conformable to our own, that we shall give the whole section. It is not the operation itself which destroys the soil, but the injudicious cropping carried on afterwards. The like injury may be done by lime, which we have seen practically exemplified.

" Paring and burning is not much practised in the eastern and northern parts of the county; in the middle and southern parts it is most prevalent; but even there, it is confined to old swards, and coarse, rough, rushy, and heathy lands. For the first breaking up of such ground, it is certainly very convenient, and preferable to any other mode we have ever seen; but though we are fully convinced of its beneficial effects in such situations, yet we have our doubts whether it could be used with advantage upon lands that have lain a few years in grass, and that would produce good crops of grain *immediately on being ploughed out*, which is not the case with coarse, rough, heathy lands, or even very old swards on rich fertile soils; it being found that crops on the latter, are frequently very much injured by " *leaping*" for two or three years; which paring

paring and burning entirely obviate, and infure full crops to the farmer, who need not be under any apprehenfion of his foil being ruined by it, provided he purfues the following courfe: 1. Turnips. 2. Oats. 3. Fallow, well limed for turnips. 4. Barley, fown up with clover and grafs feeds, and depaftured with fheep for three or four years; and afterwards (if not intended to lye in grafs) continue it in the rotation mentioned p. 73. It is the *injudicious cropping*, more than the ill effects derived from paring and burning, that has been the chief caufe of bringing fuch an odium on this practice, which is certainly an excellent one in *fome fituations*, and *properly conducted*; but, like the fermented juice of the grape, may be too often repeated, and improperly applied.

"The popular clamour againft this practice, "that it *deftroys the foil*," we can by no means admit; and are inclined to believe, that not a fingle atom of foil is abftracted, though the bulk of the fod or turf be diminifhed. This arifes from the burning of the roots or vegetable fubftances, which, by this procefs, afford a confiderable portion of alkaline falts, phlogiftic or carbonic matter, and probably other principles friendly to vegetation; as we find thofe afhes produce abundant crops of turnips, which fatten ftock much quicker than thofe after any other dreffing or manure we have ever feen; and the fucceeding crops of corn are fo very luxuriant, as to tempt the *injudicious cultivator* to purfue it too far; who, for the fake of a temporary gain, may be faid to rip it up, as the boy did with his goofe that laid golden eggs."

We apprehend that too much is faid, p. 139, viz. "That every exertion of ingenuity is practifed to raife a large portion of farm-yard dung." *Query*, Are the corn-crops cut low? Unlefs this is attended to, one fifth, in fome cafes more, of the means of making manure, is effectually loft. The conduct of the Cheviot farmers, in allowing their dung to be taken away by the floods, deferves fevere reprobation.

We entirely agree with the opinion given, p. 143, "That upon fome foils, the application of lime, in confiderable quantities, is abfolutely neceffary, in order to bring them to their moft fertile ftate, and to prepare them for the action of other manures" We have often, however, viewed the Northumberland lime-hufbandry, as little better than giving the land a fnuff; and we do not wonder, "that many intelligent farmers begin to doubt of its efficacy, and the propriety of continuing to lay it upon their old tillage lands." In fuch fituations, it is only throwing away money unneceffarily,

ceſſarily, to expend it upon the purchaſe of lime. Refreſh the land with graſs, and the operation may be profitably repeated.

The account in chap. 13. of the wild cattle belonging to Lord Tankerville, is entertaining.

" *The wild cattle*—are only found in Chillingham Park, belonging to the Earl of Tankerville; and as it is probable they are the only remains of the true and genuine breed of that ſpecies of cattle, we ſhall be more particular in our deſcription.

" Their colour is invariably white, muzzle black; the whole of the inſide of the ear, and about one third of the outſide from the tip downwards, red; horns white, with black tips, very fine, and bent upwards. Some of the bulls have a thin upright mane, about an inch and a half, or two inches long. The weight of the oxen is from 35 to 45 ſtone, and the cows from 25 to 35 ſtone the four quarters, 14 lb. to the ſtone. The beef is finely marbled, and of excellent flavour.

" From the nature of their paſture, and the frequent agitation they are put into, by the curioſity of ſtrangers, it cannot be expected they ſhould get very fat: yet the ſix-years-old oxen are generally very good beef; from whence it may be fairly ſuppoſed, that, in proper ſituations, they would feed well.

" At the firſt appearance of any perſon, they ſet off at full ſpeed, and gallop to a conſiderable diſtance; when they make a wheel round, and come boldly up again, toſſing their heads in a menacing manner. On a ſudden, they make a full ſtop, at the diſtance of forty or fifty yards, looking wildly at the object of their ſurpriſe; but, upon the leaſt motion being made, they again turn round, and gallop off with equal ſpeed: but, forming a ſhorter circle, and returning with a bolder and more threatening aſpect, they approach much nearer; when they make another ſtand, and again gallop off. This they do ſeveral times, ſhortening their diſtance, and advancing nearer, till they come within a few yards, when moſt people think it prudent to leave them.

" The mode of killing them was, perhaps, the only modern remains of the grandeur of ancient hunting. On notice being given, that a wild bull would be killed upon a certain day, the inhabitants of the neighbourhood came, in great numbers, both horſe and foot. The horſemen rode off the bull from the reſt of the herd, until he ſtood at bay, when a markſman diſmounted and ſhot. At ſome of theſe huntings, twenty or thirty ſhots have been fired, before he was ſubdued. On ſuch occaſions, the bleeding victim grew deſperately furious, from the ſmarting of his wounds, and the ſhouting of ſavage joy that were echoing from every ſide. From the number of accidents that happened

ed, this dangerous mode has been ſeldom practiſed of late years; the park-keeper alone generally ſhooting them with a rifled gun, at one ſhot.

"When the cows calve, they hide their calves, for a week or ten days, in ſome ſequeſtered ſituation, and go and ſuckle them two or three times a-day. If any perſon come near the calves, they clap their heads cloſe to the ground, and lye like a hare in form, to hide themſelves. This is a proof of their native wildneſs; and is corroborated by the following circumſtance, that happened to the writer of this narrative, who found a hidden calf, two days old, very lean, and very weak. On ſtroking its head, it got up, pawed two or three times like an old bull, bellowed very loud, retired a few ſteps, and bolted at his legs with all its force. It then began to paw again, bellowed, ſtepped back, and bolted as before; but knowing its intention, and ſtepping aſide, it miſſed me, fell, and was ſo very weak that it could not riſe, though it made ſeveral efforts: But it had done enough; the whole herd were alarmed; and coming to its reſcue, obliged me to retire; for the dams will allow no perſon to touch their calves, without attacking them with impetuous ferocity.

"When any one happens to be wounded, or grown weak and feeble through age and ſickneſs, the reſt of the herd ſet upon it, and gore it to death."

A very full account of the ſheep huſbandry of the county is given, p. 153. *et ſeq.* They are claſſed under three diſtinct heads; viz. the *Cheviot*, the *Heath ſheep*, and the *Long-woolled breed*. Drawings of a ram of each breed are preſented; but we have been informed that ſome of them are not correct. In ſpeaking of the heath ſheep, it is ſaid—

"The breeders of this kind of ſheep on the ſouth-weſt corner of the county, are very confident that they are a *much hardier ſheep* than the Cheviot breed; and, upon their high-expoſed heathy mountains, where there is *very little green herbage*, much more profitable; while the Cheviot farmers aſſert, that theirs are equally hardy, and that the greater value of the fleece gives them a decided ſuperiority. We have before ſtated, that the fineneſs of wool is not a proper criterion by which the merits of a breed of ſheep are to be determined. It can only be done by fair experiment, in which all the circumſtances of the caſe are included. But we do not find that this has ever been done by either party; and though it is only opinion againſt opinion, yet both parties are ſo poſitive, that they are ready to quarrelwith any perſon who happens to expreſs an opinion of his own.

We ſhall therefore content ourſelves with ſtating, that the queſtion can only be properly decided by a parcel of each kind of ewes (ſuppoſe 100) being depaſtured and kept in every reſpect alike, upon ſome of thoſe high, expoſed ſituations, the height of which is much more elevated, and the herbage coarſer, than the Cheviot paſtures, and almoſt totally covered with *heath or heather* (*erica vulgaris*); and, at the end of *five, ſix, or ſeven years*, that breed which has brought the greateſt number of ſheep to market, and made the moſt profit, will deſervedly be deemed the *hardieſt*, *beſt*, and *moſt eligible* for ſuch ſituations.

" Until ſome experiment of this kind determine the matter, we hope we ſhall not give offence to either party by ſtating, that we have ſeen the heath ſheep bred with advantage upon higher and coarſer paſtures than *Common Burn*, or thoſe other kinds around Cheviot; and that it may probably turn out, that each breed is particularly adapted to particular ſituations; the one to *coarſe, expoſed mountains*, where the luxury of green herbage is thinly ſcattered, or rarely to be found; the other, to *hilly paſtures*, where conſiderable portions of verdant ſurface predominate, ſuch as characteriſe the paſtoral diſtricts round Cheviot."

The practice of milking ewes is very juſtly cenſured, and we are happy to learn that this unprofitable cuſtom is going faſt into diſuſe.

The comparative ſtatement betwixt horſes and oxen, for the purpoſe of the draught, is given with ſo much accuracy, that we cannot refrain from extracting the whole of it. If oxen were invariably employed in farm-labour, it is evident that they would occaſion a famine in the country, inſtead of rendering proviſions cheap, as ſpeculative men have idly ſuppoſed.

A comparative Statement between Horſes *and* Oxen, *for the purpoſe of the Draught.*

" By way of preliminary, it will be neceſſary to admit as data, that a horſe, which eats 70 buſhels of oats per year, will not conſume of other food ſo much as an ox that gets no corn *; but, in the following eſtimate, we ſhall allow horſes to eat as much

* This is deduced from the following experiments.

Three

much as oxen, as the difference is not yet ſufficiently aſcertained.

" That the oxen are yoked at three years old, and are worked till ſix; and for the firſt year require eight to do the work of two horſes; but, after having been worked a year, and become tractable and ſtronger, ſix are equal to two horſes, either by being yoked three at a time, or two, and driven by the holder with cords; of courſe, the expence of a driver may be eſtimated to be ſaved for one half the year.

" That the expences of a ploughman, the plough, and other articles that are the ſame in both teams, need not be taken into the account.

" And that oxen, to work regularly through the year, cannot work more than half a day at a time.

Expence of an ox per ann.

	£.	s.	d.	£.	s.	d.
Summering,—Graſs 2 acres, at 20s. per acre -				2	0	0
Wintering,—on ſtraw and turnips	2	0	0			
but if on hay -	4	0	0			
The average is * - - -				3	0	0
Carry over				£. 5	0	0

Three working horſes, about 15½ hands high, eat in 14 days 96 ſtones of hay, which is for each horſe, at the rate of 16 ſtones a-week, with an allowance of oats, 12 gallons per week.

Mr Thomſon's (of Chillingham Barns) 18 horſes in 12 days eat 430 ſtones of hay: which is 14 ſtones per week each horſe: allowance of oats, 16 gallons per week.

Mr Aitkinſon's of Yevering, eat, per week, 13 ſtones of hay, 2 buſhels of potatoes, and 16 gallons of oats.

Mr Johſon's of Newtoun, five years old working oxen, with a full allowance of hay, had, each ox, 6 quarts of oats per day.

In 15 days, 4 oxen eat 164 ſtones 7 lb. of hay, which is after the rate, for each ox, of hay 19½ ſtones per week.

of oats 10½ gallons ditto.

Three days after, the ſame oxen were put to hay only; and in 7 days eat 79 ſtones 10 lb., or 20 ſtones, each ox per week, which is only ¾ ſtone more than when they got 10½ gallons of corn in the ſame time. This is a ſingular circumſtance, and deſerving of further inveſtigation.

An unworked ox, 3½ years old, was put to good old meadow-hay, the 29th of November, and eat 49 ſtones in 21 days; or, per week, 16 ſtones 5 lb.

An idle horſe (15½ hands high) eat of the ſame hay, 20 ſtones in 10 days, or, per week, 14 ſtones—had no corn.

* A great portion of the ſoil of this county is improper for turnips. In thoſe diſtricts hay is given, inſtead of turnips; for which reaſon we have taken the average.

	£.	s.	d.
Brought over	5	0	0
Intereſt at 5 per cent. for price of the ox -	0	10	0
Harneſs, ſhoeing, &c. - - -	0	15	0
	6	5	0
Deduct for the increaſed value of an ox for 1 year	1	0	0
Gives the expence per ann. of an ox for the team	5	5	0
And the expence of 6 oxen - -	31	10	0
To which muſt be added the expence of a driver for half a year - - - - -	3	10	0
Total expence of a team of 6 oxen - -	35	0	0

An eight-ox team.

The expence of an ox per ann. being - -	5	5	0
			8
That of eight will be - - -	42	0	0
To which add the expence of a driver - -	8	0	0
Gives the expence per ann. of an eight-ox team	50	0	0
Therefore the expence of a team of oxen for the firſt year will be - - - -	50	0	0
Ditto the ſecond year - - -	35	0	0
Ditto the third year - - -	35	0	0
Divided by - - - - 3)	120	0	0
Gives the average expence per ann. of an ox-team, from 3 to 6 years old - -	40	0	0

Expence of a horſe per ann.

Summering—Graſs 2 acres, at 20s. per acre -	2	0	0
Wintering—Straw 13 weeks, at 9d. per week -	0	10	0
Hay 16 ditto, 1½ tons, at 2l. per ton	3	0	0
Corn (for a year), 70 buſhels of oats, at 2s per buſhel	7	0	0
Shoeing and harneſs - - - -	1	0	0
Carry over	£. 13	10	0

	L.	s.	d.
Brought over	13	10	0
Annuity to pay off 25l. in 16 years, the purchaſe value of the horſe at four years old *	2	5	0
Expence of a horſe per ann.	15	15	0
Ditto of a two-horſe team	31	10	0

If a three-horſe team be uſed, the account will ſtand thus :—

The expence of a horſe per ann. being	15	15	0
			3
That of three will be	47	5	0
To which add the expence of a driver	8	0	0
Gives the expence of a three-horſe team	55	5	0

" If the compariſon be made with the horſe-team of many of the midland counties, where they uſe *five horſes, yoked one before another in one plough*, the account will ſtand thus :—

The expence of one horſe per ann. being	15	15	0
			5
That of five will be	78	15	0
To which add the expence of a man to drive	18	0	0
The expence of a team of 5 horſes will be	96	15	0
Ditto of 3 ditto	55	5	0
Ditto of 2 ditto	31	10	0
Ditto of 8 oxen	50	0	0
The average expence of an ox-team, from three to ſix years old, that will do the ſame quantity of work as two horſes	40	0	0

" The concluſions to be drawn from the above ſtatement are ſo obvious, as to need little elucidation. But we cannot help remarking how ſtrong the force of prejudice muſt be, to continue the uſe of five horſes, and heavy, clumſy, unwieldy *wheel-ploughs*, where a ſingle *ſwing-plough*, and two horſes yoked double, and driven by the holder, would do the ſame quantity of work, equally well, and at one third the expence!

* This is calculated on the ſuppoſition, that a horſe bought at four years old will work ſixteen years; and admitting his price to be 25l., then the queſtion will be, to find what annuity will pay off 25l. in ſixteen years, allowing compound intereſt at 5 per cent., which, by the rules laid down by the writers on algebra, will be 2l. 5s.

" But before any proper concluſions can be drawn, whether *ox-teams* or *horſes* are the moſt eligible, it will be neceſſary to conſider whether the quantity of land employed in ſupporting thoſe animals, be uſed in the moſt profitable mode to the community, as well as the occupier.

" With the latter, the firſt queſtion for conſideration is, Whether eight oxen uſed in the team, or in grazing, will pay him the moſt money?

" Suppoſe eight oxen at *three years old*, were put to the plough, and plough ſix acres per week, which, at 3s. 4d. * per acre, is 20s.; and if they work forty-eight weeks in a year, then their whole earnings, (after deducting 6l. for expences of harneſs, ſhoeing, &c.) will be 42l.; but if they plough only *five acres per week*, (which is probably nearer the truth), then their whole earnings will be only 34l.

" The ſame oxen put to graze at the ſame money, ſhould improve in value 5l. 5s. each, in the firſt caſe, and 4l. 5s. in the latter; but we are inclined to believe, there are few ſituations, if the cattle are of a good quick-feeding kind, where they would not pay *conſiderably more*.

" In reſpect to the community, the account will be nearly as follows:—

" From the above ſtatements, we find that an ox for ſummering and wintering, requires - - $3\frac{1}{2}$ acres;
Therefore a ſix-ox team will require - —21 ditto
And two horſes for graſs and hay per ann. require - - - - 7 ditto
For corn and ſtraw - - - 4 ditto
Land neceſſary for keeping two horſes per ann. - - - - —11 ditto

The difference in the quantity of land required for a team of oxen more than horſes - - } 10 acres.

" Hence it appears, that a team of ſix oxen requires ten acres more land to maintain them than a team of two horſes, which will do the ſame work; and, of courſe, the produce which might be derived from theſe ten acres is loſt to the community. Suppoſe it to be one half in graſs, the other half in tillage, then we ſhall have

5 acres of clover or graſs.
$1\frac{2}{3}$ ditto of oats.
$1\frac{2}{3}$ ditto of turnips, or fallow.
$1\frac{2}{3}$ ditto of wheat.

" It

* If to this 3s. 4d. be added 1s. 8d., the wages for the ploughman and driver, it will make 5s., the uſual price for ploughing an acre in this diſtrict.

" It would then ſend to market yearly, at the loweſt computation,

$7\frac{1}{2}$ cwt. of beef.
8 quarters of oats.
And 5 ditto of wheat.

" From this view of the ſubject, it appears, that if oxen were univerſally uſed for the draught, in the room of horſes, there would be a conſiderable defalcation in the ſupply of the markets both in corn and animal food *. And the loſs to the farmer, would be the profit derived from the produce; which, by the uſual mode of allowing one third for the farmer's profit, would, in this caſe, be about 10l."

The above is the moſt correct ſtatement upon this important ſubject that we have ſeen. The advocates for oxen are conſtantly calling for facts! Here they are to their hand. Indeed we have always conſidered the general practice of laying oxen aſide, where huſbandry was actively carried on, as the ſtrongeſt proof of their inutility.

The obſtacles to improvements are ſtated to be, " Letting no leaſes, or leaſes for five or ſeven years." The loſs which the country ſuſtains from ſuch pernicious conduct, is clearly elucidated. The payment of tithes in kind, is likewiſe brought forward as an obſtacle to the advancement of agriculture; and it affords us great ſatisfaction to find, that the ſentiments we have conſtantly maintained upon this branch of political economy, are ſo ably ſupported by ſuch eminent and judicious agriculturiſts. We have long conſidered it as an axiom, That the waſte lands cannot be cultivated, unleſs this ancient, but pernicious burden is previouſly commuted. This is in fact done under every incloſure-bill which is paſſed into a law, as an allotment in lieu of tithe is ſet apart for the impropriator. Where tithe is regularly drawn, it is not ſimply 10l. per cent. upon the product of the ground, *but* 10*l. per cent. upon the*

* In his county, it is eſtimated, that there are capable of cultivation 800,000 acres; and allowing one third of this to be in tillage, that is, 266,666 acres, and that every 50 acres in tillage will require a team to manage it properly; of courſe, there will be at leaſt 5333 teams; but, for the ſake of round numbers, call it 5000 teams:

	£.
Then 5000 × $7\frac{1}{2}$ cwts. beef = 37,500 cwts of beef, at 30s. -	56,250
5000 × 8 qrs. oats = 40,000 qrs. of oats, at 16s. -	32,000
5000 × 5 qrs wheat = 25,000 qrs. of wheat, at 40s. -	50,000
	138,250

—the value in proviſions that would be loſt to this country yearly, if horſe-teams were aboliſhed, and oxen uſed in their ſtead.

the tenant's capital stock, becauſe this capital is all laid out in the raiſing of the produce. Inſtead of being 10l. per cent. upon the rent, as very miſtakenly ſuppoſed by ſome people, it may amount to ten times more, where the farm is poſſeſſed under a lucrative leaſe, or in the hands of a farmer who is an adept at his buſineſs.

Under the ſection of weights and meaſures, p. 194, it is ſaid—

"The Board of Agriculture could not do the public a greater ſervice, than by bringing forward a regulation of weights and meaſures. One weight and one meaſure, derived from the ſame root, and increaſing or decreaſing in a ten-fold ratio, would introduce ſuch ſimplicity, eaſe, and perſpicuity, into all tranſactions of buſineſs, (where calculations are neceſſary), as would prevent the numberleſs miſtakes and errors which are daily happening.

"Preparations for remedying this great inconvenience, have been made at different times; and we believe there are ſufficient materials for perfecting the meaſure, whenever it is thought proper to bring it forward."

A very animated concluſion is given; but we are ſorry that want of room prevents us from inſerting it. In this branch, the means of improvement are brought under one point of view; and we can juſt mention them. They are, *drilling of peas and beans—watering of meadows—draining—planting.*—An *increaſed attention* to the *live ſtock* of the country.—*Single-horſe carts—public farms*, "where youth might be inſtructed in agriculture, and experienced farmers might viſit with advantage."

Upon the whole, it is but juſtice to the authors of this Report to ſay, that while it contains a large fund of ſound practical information, it is written with ſpirit and perſpicuity, and cannot fail to prove highly intereſting to thoſe who ſearch after a detailed account of Britiſh huſbandry. We have received much pleaſure in peruſing ſuch an intelligent work; and ardently wiſh that every report preſented to the Agricultural Board, had been executed upon the ſame liberal and ſcientific principles.

PART

PART III.

EXTRACTS FROM AGRICULTURAL PUBLICATIONS.

From the Agricultural Survey of the West Riding of YORKSHIRE.

FALLOWING DEFENDED.

WHETHER Summer-fallow is neceſſary or unneceſſary?—is a queſtion lately agitated; and, in a reſpectable work, (the Survey of Norfolk), an attempt has been made to explode this practice, which has long been conſidered as a moſt beneficial improvement. The agriculture of Britain being materially intereſted in the iſſue of this queſtion, the following anſwers to the Norfolk ſurveyor are ſubmitted to the public.

To keep his land clean, will always be a principal object with every good farmer; for, if this be neglected, in place of carrying rich crops of corn or graſs, the ground will be exhauſted by crops of weeds. Where land is foul, every operation of huſbandry muſt be proportionally non-effective, and even the manures applied will, in a great meaſure, be loſt.

If the ſeaſon of the year, and the ſtate of the weather, when the ground is ploughed preparatory to receiving the ſeed, be duly conſidered, it will be found, that, at that time, it can neither be properly divided by the action of the plough, nor can root-weeds, or annual weeds, be then extirpated. Hence ariſes the neceſſity of working it in Summer, when the weather is favourable for the purpoſes of ploughing, and when root-weeds may be dragged to the ſurface. It is only at that time the full advantages of ploughing are attainable; for Summer-fallow may, with propriety, be ſtyled ploughing in perfection.

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The neceſſity of Summer-fallow depends greatly upon the nature and quality of the ſoil; as, upon ſome ſoils, a repetition of this practice is ſeldomer required than upon others. Wherever the ſoil is incumbent upon clay or till, it is more diſpoſed to get foul, than when incumbent upon a dry gravelly bottom: beſides, wet ſoils, from being ploughed in Winter, contract a ſtiffneſs, which leſſens the paſture of artificial plants, and prevents them from receiving ſufficient nouriſhment. When land of a dry gravelly quality gets foul, it may be eaſily cleaned, without a plain Summer-fallow; as crops, ſuch as turnips, &c. may be ſubſtituted in its place, which, when drilled at proper intervals, admit of being ploughed as often as neceſſary; whereas wet ſoils, which are naturally unfit for carrying ſuch crops, muſt be cleaned and brought into good order by frequent ploughings and harrowings during the Summer months.

It is from neglecting to make theſe diſtinctions, that the erroneous ſyſtem laid down by Mr Kent, the Norfolk ſurveyor, evidently proceeds.

The county of Norfolk generally conſiſts of dry ſand, or of rich ſandy loam; and, agreeably to the above principles, Summer-fallow may, in that diſtrict, be conſidered as unneceſſary. If Mr Kent had confined his ſtrictures to the huſbandry of Norfolk, no objection could reaſonably have been urged againſt them; but, when he condemns Summer-fallow altogether, he ſtrikes at the agriculture of Britain in a moſt material point.

The ſubſtance of Mr Kent's arguments againſt fallow, may be compriſed under four heads:

1ſt, Nature does not require any pauſe or reſt; and the earth was evidently deſigned to yield a regular uninterrupted produce.

2dly, As the productive quality of the earth never ceaſes, if corn is not ſown, weeds will be produced; therefore, it is our buſineſs to expel the unproductive plant, and to introduce others that are beneficial.

3dly, That the idea of leaving land to reſt, is ridiculous; for by keeping it clean, and by a judicious intermixture of crops, it may be managed like a garden, and ſown from one generation to another.

4thly, That the fallows in England exhibit nothing but a conflict between the farmer and his weeds, in which the latter generally prevail; for they are only half-ſtifled, and never effectually killed.

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The moſt of theſe arguments may be granted, and yet the utility, nay the neceſſity of Summer-fallow, be conſiſtently maintained.

It is already acknowledged, that it is only upon wet ſoils, or, in other words, upon land unfit for the turnip-huſbandry, a plain Summer-fallow is neceſſary; and this, we ſuppoſe, includes three fourths of the iſland. The utility of Summer-fallow upon ſuch ſoils, is not contended for becauſe nature requires a pauſe or reſt to invigorate her to carry freſh crops, but ſolely becauſe it is impoſſible to keep them clean, without this auxiliary aſſiſtance. To ſpeak of following nature in farming, is mere ſound; for, if we were to imitate nature, we would not cultivate land at all. Nature is often improved by art; and fallowing is the means employed for removing a hoſt of enemies, which prevent her from being fertile and productive.

As a field filled with root-weeds, muſt be in a ſtate of greater exhauſtion, than if it carried a heavy crop of corn; ſo, the productive quality of the earth muſt neceſſarily decreaſe, in proportion to the quantity of weeds it brings forth. But, becauſe corn is not ſown, it does not follow that weeds of any kind ſhould be ſuffered to grow. The object of allowing the ground to remain a year under fallow, is to afford time and opportunity for expelling the unproductive plant, and to prepare it for the reception of others which are beneficial.

The moſt judicious intermixture of crops upon clay ſoils, will not preclude the neceſſity of Summer-fallow, although it will go a great way to prevent a frequent repetition of it. An eight-courſe ſhift, ſuch as, fallow, wheat, beans drilled and horſe-hoed, barley, graſs-ſeeds, oats, beans, and wheat, is as much as can be recommended; and it is only upon rich clay, or deep loam, where ſuch an extenſive rotation is admiſſible. A ſhift of this kind, when dung is applied twice in the courſe of it, will pay the farmer more handſomely than the moſt judicious intermixture of crops, where fallowing is neglected.

Again, no rules drawn from garden practice will apply to operations carried on in the field; the ſoils are generally very different; and any compariſon that can be made, muſt be with thoſe rich ſandy ſoils, upon which we have allowed fallowing to be unneceſſary. The crops in the garden are reaped at ſo many different times, and often ſo early in the ſeaſon, that opportunity is always gained for working the ground

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in the completeſt manner; while the immenſe difference betwixt working with the plough and the ſpade, renders every compariſon ridiculous.

A fallow field, which exhibits a conflict betwixt the farmer and his weeds, does not deſerve that appellation; for the intention of the fallow is to extirpate theſe weeds. We are inclined to think, that the ſhocking ſituation of many Engliſh fallows may be attributed to the feeding and folding them with ſheep. The farmer, from being obliged, by the conditions of his leaſe, or the rules of common-field management, to fallow every third or fourth year, is tempted to draw ſomething from them when in this unproductive ſtate, and, to gratify his avarice in the firſt inſtance, ſacrifices the good huſbandry which it is his ultimate intereſt to practiſe. A well managed fallow ſhould be wrought as early in the ſeaſon as poſſible, and continually turned over where the leaſt particle of quickens appears. It is no argument againſt the utility of fallows, that they are often managed in a different way; this goes only againſt the impropriety of the management, but does not militate againſt the practice itſelf.

Upon the whole, the neceſſity of Summer fallow turns upthis ſingle point:—Can wet lands be advantageouſly employed in raiſing turnips or cabbages? a queſtion which the *practical farmer*, who is ſufficiently acquainted with the nature of ſuch ſoils, and the immenſe labour required to bring them into proper tilth, will have no difficulty to anſwer in the negative. It is not diſputed but that turnips and cabbages will grow upon theſe ſoils; but the queſtion is, Whether the extraordinary labour they require, and the damage ſuſtained by the ground, during the conſumption or carrying off the crops, will not exceed the value of the produce? Does Mr Kent mean to recommend the turnip-huſbandry under ſuch circumſtances? If he does, the recommendation furniſhes a preſumption that he is unacquainted with the cultivation of wet lands. If he does not, how is the ground to be kept clean, and enabled to yield a regular uninterrupted produce?

Nothing that is ſaid in defence of Fallow, is meant in vindication of the abſurd ſyſtem of taking only two crops to one fallow, as practiſed upon many Engliſh common-fields. It is only meant to ſhow that clay ſoils, and every ſoil incumbent upon a wet bottom, cannot be kept clean, without the aſſiſtance of this radical and ancient practice. How often it ſhould be uſed, muſt in a great meaſure be left to the diſcretion

diſcretion of the farmer, who will repeat it when neceſſary, if he knows his own intereſt. We ſhall conclude our defence of fallow, with an extract taken from p. 192. of the Survey alluded to. "*It is highly proper to be careful againſt adopting the viſionary recommendations of modern theoriſts, who, upon hypotheſes of their own, hold up wild ſyſtems of deluſion, which are apt to miſlead the credulous, and do great injury.*"

Account of the Rev. Mr ADAM DICKSON, *extracted from the Introduction to the "Huſbandry of the Ancients."*

MR DICKSON was a ſon of the late Reverend Mr Andrew Dickſon, miniſter of Aberlady, in the county of Eaſt Lothian. He had a liberal education at the univerſity of Edinburgh; and, having a very promiſing genius for learning, was always deſigned for the church. His father, however, having a large farm, he early turned his thoughts to agriculture; and, in his youth, paſſing ſome part of his time with the farmers of that opulent county, who are many of them not unfit to converſe with men of letters, he, from them, as well as from his own obſervation, acquired the exact knowledge of facts, and of the practice of huſbandry. Being a man of a very lively apprehenſion, of an ardent mind, and of a clear and ſound judgement, he ſoon became an adept in any branch of ſcience to which he applied.

Mr Dickſon was ordained miniſter of Dunſe, in the ſhire of Berwick, in the year 1750. As his ſettlement had been delayed for a conſiderable time, on account of a law-ſuit about the legality of the preſentation, an oppoſition to him was ſtirred up in the pariſh; but ſuch was the ability, good ſenſe, and engaging temper of Mr Dickſon, and ſuch the candour and generoſity of his conduct, that his moſt ſanguine opponents very ſoon became his greateſt friends.

Our author reſided for twenty years in Berwickſhire, where improvements in agriculture having been much more recent, and the difficulties to be ſurmounted much greater than in Eaſt Lothian, he had occaſion there to obſerve the moſt ſpirited exertions by the cultivators of land. This change of ſituation enlarged his views, and extended his knowledge, on the ſubject of his favourite purſuit.

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In the year 1770, Mr Dickſon returned to his native county, having been tranſlated from Dunſe to Whittingham, in Eaſt Lothian, where he lived but a few years: he was killed by a fall from his horſe, on the 25th of March 1776. No man could be more univerſally regretted among the circle of his acquaintance, than he was; not merely on account of his reſpectable abilities as a clergyman and a ſcholar, but ſtill more on account of the unbounded benevolence of his heart, and the peculiar frankneſs and promptitude with which he gave his aſſiſtance, in advice, or in credit and ſupport, to every perſon who had the ſmalleſt title to aſk him.

It was with no ſmall degree of judgement, that Mr Dickſon had early ſelected to himſelf a corner of literature, for which the habits of his life had particularly qualified him, and in which he was not likely to interfere with any of his companions, who ſtarted at the ſame time, for the fame derived from writing well. He had obſerved with regret, that the books of huſbandry, that had been publiſhed in England, were ill calculated for the ſoil and climate of Scotland; and likewiſe, that many of them conſiſted chiefly of uncertain ſpeculations on theories, not well ſupported by the hiſtory of facts. He was therefore determined to compoſe a Treatiſe of Agriculture, on a plan that ſhould obviate theſe objections. The firſt volume of this Treatiſe was publiſhed in the year 1764, and the ſecond ſome years afterwards; and has ever ſince been held, not only to be the book beſt adapted to the practice of the Scotiſh farmer, but, upon the whole, one of the moſt judicious and practical treatiſes on the ſubject that has ever been publiſhed in Britain.

The Huſbandry of the Ancients was the produce of Mr Dickſon's maturer years, and, as he confeſſes himſelf in the preface, coſt him a very great degree of application and labour. The public will judge of the execution. To the editor, it appears to do much honour to the author, and to be a very valuable preſent to all who are converſant in the firſt and moſt uſeful of all the neceſſary arts. Farmers, in general, are entirely ignorant of the language in which the books of ancient huſbandry are written; and there are but few of thoſe lovers of the art, who are maſters of the language, that will take the trouble to ſelect out of the ancient authors, in ſome of which there is no ſmall degree of obſcurity, all the experiments and rules that ſuit the modern practice.

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This they will find done to their hands by the author, who has collected, under proper heads, from the ancient writers, whatever is material to the moderns; has compared the facts and rules together, and has ſet them in one view before his readers, both in a Tranſlation, and in the original Latin. His perfect knowledge of the ſubject, has enabled him to clear up many difficulties, which the learned commentators on the *Rei Rusticæ Scriptores*, being entirely ignorant of huſbandry, had rendered more obſcure; while his ſkill in modern agriculture enabled him to make a judicious compariſon between that and the practice of the ancients.

It appears from the author's preface, which follows, that his work was ready for the preſs before his death; though, by the copy of a letter in the editor's hands, he had not then determined whether he would treat with a bookſeller, or publiſh it by ſubſcription. But although the work was completed for the preſs, the candid reader may probably find defects and inaccuracies in it, that would have been ſupplied or corrected, had the author lived to ſuperintend the preſs. He will alſo reflect, that the book was written fully twelve years ago, and therefore will make an allowance for there being no notice taken in it of improvements or diſcoveries in huſbandry, that may have been made ſince that time.

The manuſcript was given to the editor a few years ago, by a daughter of the author's, who ſurvived him, with a recommendation to do with it what he thought beſt, for the memory of her deceaſed father, and his own friend. After reviſing it with care, the editor put it into the hands of the noble Lord to whom it is inſcribed; with whoſe approbation, and under whoſe patronage, he ventured to offer it to the public, in the ſhape in which it now appears, with little doubt of its meeting with a favourable reception.

FOR THE FARMER'S MAGAZINE.

AGRICULTURAL TABLE OF SCOTLAND,

EXTRACTED BY PERMISSION,

From Mr ROBERTSON's Statistical Table.

I. Square miles of ſurface.
II. Population per ſquare mile.
III. Rent per Scotiſh acre in ſhillings and pence.
IV. Proportion in 100 parts of arable land.
V. Ditto of mooriſh land, occaſionally cultivated as meadows.
VI. Ditto of hills, &c. altogether unfit for tillage.

COUNTIES, &c.	I.	II.	III. s.	III. d.	IV.	V.	VI.
Aberdeen	1890	65	2	9¾	16	46	38
Ayr	1034	73	6	3	24	36	40
Argyle-mainland	2130	24	1	7½	6	12	82
Argyle-iſlands	794	31	1	2¾	6	12	82
Argyle-ſhire	2924	26	1	6	6	12	82
Banff	750	51	2	3¼	15	40	45
Berwick	480	64	9	8½	27	27	46
Bute-iſle	40	119	5	4½	25	25	50
Arran	184	32	0	9	5	20	75
Bute-ſhire	224	47	1	7¼	9	21	70
Caithneſs	690	36	1	1½	8	12	80
Clackmannan	48	182	11	7	40	35	25
Cromarty	25	211	7	5½	30	34	36
Dumfries	1344	40	3	2½	15	30	55
Dumbarton	245	75	5	5	25	25	50
Edinburgh	360	140	16	6	32	32	36
Elgin	575	48	2	10	20	36	44
Fife	476	183	14	4	32	48	20
Forfar	928	98	5	1¾	30	25	45
Haddington	300	96	17	4½	64	16	20

AGRICULTURAL TABLE—continued.

Counties, &c.	I.	II.	III.	IV.	V.	VI.
Inverneſs-mainland	2894	16¾	os. 9d.	4	6	90
Skye-iſland	792	18⅓	0 5¼	4	6	90
Uiſts, Harris, Barra, &c.	616	17½	0 4¾	4	6	90
Inverneſsſhire	4302	17	0 7¾	4	6	90
Kincardine	380	70	4 0	20	30	50
Kinroſs	78	68	6 4¾	25	50	25
Kirkcudbright	864	31	4 4½	12	24	64
Lanark	870	144	5 8½	15	40	45
Linlithgow	112	156	15 6¼	40	40	20
Nairn	152	40	2 0¾	20	30	50
Orkney-iſles	350	46	1 10½	10	14	76
Shetland-iſles	1250	16	0 2⅘	4	6	90
Orkney-ſhire	1600	27	0 5½	5¼	7¾	87
Peebles	294	27	4 0	6	18	76
Perth	2374	56	3 9¾	16	20	64
Renfrew	246	296	10 2¼	20	40	40
Roſs-mainland	2280	18	0 7½	5	7	88
Lewis-iſle	649	13	0 3	2	6	92
Roſs-ſhire	2929	17	0 6½	4¼	6	89
Roxburgh	738	41	5 5¼	18	27	55
Selkirk	260	16	4 0	5	15	80
Stirling	704	66	4 10	12	36	52
Sutherland	1894	12	0 2⅖	2	3	95
Wigton	469	45	4 5¾	15	25	60
Freſh-water Lakes	569					
General Reſult	31, 168	50	3 1¾	12¼	20	67¾

TABLE,

Showing the difference betwixt the Scots Standard Linlithgow boll, and the Wheat and Barley Measures used in several Counties in Scotland

100 Bolls of	Linlithgow Boll. Wheat B.	Wheat F.	Wheat 100 pts.	Barley B.	Barley F.	Barley 100 pts.
Linlithgow	100	0	0	100	0	0
Aberdeen	122	1	41	109	2	70
Argyle, *Inver*	116	1	1	107	1	3
Argyle, *Camp*				128	2	83
Ayr	97	3	46	134	0	67
Banff	105	1	64	105	0	41
Berwick	152	3	76	104	3	35
Bute	130	3	92	134	2	70
Caithneſs				106	1	0
Dumbarton	116	2	52	106	2	38
Dumfries	302	0	73	268	1	35
Edinburgh	101	3	5	101	2	45
Elgin	106	3	6	105	1	2
Fife	103	2	11	103	0	90
Forfar	103	2	11	103	2	51
Haddington	102	3	76	103	0	9
Inverneſs	114	1	81	109	3	14
Kincardine	112	3	76	106	1	80
Kinrols	102	2	58	103	0	9
Kirkcudbright	162	1	60	184	1	93
Lanark, Glaſgow, and L. Ward	105	1	27	104	0	70
Lanark and Upper Ward	100	0	0	103	0	90
Nairn	121	3	90	111	1	93
Peebles	107	0	59	104	1	83
Perth	102	3	94	104	0	65
Renfrew	100	0	0	106	1	0
Rois	112	3	76	103	0	90
Roxburgh	129	1	64	133	0	25
Selkirk	129	3	11	126	0	3
Stirling	108	0	94	107	1	3
Sutherland	117	2	58	110	2	57
Wigton	195	2	92	201	1	1

An Engliſh Quarter of *Wheat* and *Peas* is 1 boll 3 firlots, 3 pecks and 2 fifth parts of a peck, Scots meaſure.

Ditto of *Barley* and *Oats*, is 1 boll 1 firlot, 1 and 1-half peck.

TABLE,

For reducing the price of the Eng Quarter to the Linlith Boll.

Price of Quarter	Wheat, Peas, per B	Barley or Oats per B.
s.	s. d.	s. d
16	8 2	11 11
17	8 8	12 8
18	9 2	13 5
19	9 9	14 2
20	10 3	14 11
21	10 9	15 8
22	11 3	16 5
23	11 9	17 2
24	12 3	17 11
25	12 9	18 8
26	13 4	19 5
27	13 10	20 2
28	14 4	20 11
29	14 10	21 8
30	15 4	22 5
31	15 10	23 2
32	16 4	23 10
33	16 11	24 7
34	17 5	25 4
35	17 11	26 1
36	18 5	26 10
37	18 11	27 7
38	19 5	28 4
39	19 11	29 1
40	20 5	29 10
41	21 0	30 7
42	21 6	31 4
43	22 0	32 1
44	22 6	32 10
45	23 0	33 7
46	23 6	34 4
47	24 0	35 1
48	24 7	35 10
49	25 1	36 7
50	25 7	37 4
51	26 1	38 1
52	26 7	38 10
53	27 1	39 6
54	27 7	40 3
55	28 2	41 0
56	28 8	41 9

PART IV.

AGRICULTURAL INTELLIGENCE.

HAVING arrived at the period when a pretty accurate opinion can be formed of the crop, both as to quantity and quality, we proceed to lay before our readers the various articles of intelligence, concerning that important ſubject, tranſmitted to us by our numerous correſpondents. It is painful to obſerve, that the apprehenſions expreſſed in our laſt, reſpecting the failure of the crop in North Britain, have been fatally realiſed in ſeveral diſtricts. Indeed, the ſentiments then given were formed, not only from our own obſervation, but from information furniſhed by experienced agriculturiſts in different quarters. In addition to a ſhort crop, the evils attending an unfavourable harveſt have followed. Much grain has been ſhaken, or has dropped in the working. The early cut fields have univerſally ſprouted: and, from the unſettled ſtate of the weather, the corn, which ſtill remains in the fields, muſt be greatly damaged.

The produce of wheat in Scotland, of this year's crop, from every account, will be much below the uſual quantity. Leſs of that grain, as formerly ſtated, was ſown than uſual, particularly in the northern counties. A great number of fields, even in the beſt diſtricts, were thin; and though the quality, where it eſcaped ſprouting, is generally good, yet a doubt can hardly be entertained reſpecting the deficiency of this article, perhaps to a greater extent than laſt ſeaſon.

Barley appears to be a much better crop than laſt year, eſpecially in all the northern diſtricts, where it ripened in perfection. Oats may be conſidered as ſcantier than ever remembered in Scotland, and very unproductive in meal.—Many reaſons might be given for this failure,—the wetneſs of the ground at ſeed-time,—the ſubſequent ſevere drought, which prevented their tillering,—the attack of the grub-worm,—the exceſſive heat during the Summer-months, which is always unfavourable to this grain,—and, above all, the injury

ſuſtained from the myriads of inſects which covered them in Auguſt, and ſucked out the whole juice from the ſtraw. In a word, little or none of this grain preſents a fine ſample, and in produce from the mill does not go beyond the laſt year, unleſs it be in the Highland diſtricts, where it then never ripened.

Peas, in general, are good; but beans, now commonly ſown in their ſtead, ſcarcely exceed half a crop. As this ſpecies of pulſe ripened early, much damage was ſuſtained from the rains, both in corn and fodder. This remark, however, together with the foregoing ones, muſt be received with ſome little exception, as is very judiciouſly ſtated in another place, by a reſpectable correſpondent; for one week, nay, even one day, in point of harveſting, in this critical ſeaſon, may make a conſiderable difference in the value of the crop.

Fodder of all kinds will be ſcarce in the extreme over the whole iſland, during the enſuing Winter; and the brute creation, unleſs the Winter keep open and mild, ſtand a chance of being expoſed to great diſtreſs. Perhaps turnips could not be uſed with greater advantage, than by giving them in ſmall quantities to the lean ſtock; otherwiſe they will be ſo backward in Spring, that feeding will be a tedious buſineſs. High prices, triple the uſual rate, are talked of for wintering cattle upon ſtraw, which conſequently will be given to them in a limited manner.

Having now preſented an abſtract of the information communicated to us, it is our duty to notice the groſs impoſitions practiſed upon the public, through the channel of the Newſpapers, reſpecting the value of the crop, and the attempts lately made to inflame the minds of almoſt every rank in ſociety, againſt the growers and dealers in the produce of the ſoil. It has been expreſsly ſtated, through the whole courſe of the ſeaſon, in oppoſition to poſitive facts, that a moſt abundant crop every where loaded the face of the country, and that the high price of proviſions has ariſen, in a great meaſure, not from any real ſcarcity, but from a combination amongſt the farmers, the dealers, and the manufacturers of grain, who are held out to public deteſtation, under the odious names of Foreſtallers, Monopolizers, Engroſſers, and Regraters. Theſe miſrepreſentations, and the concluſions drawn from them, have been ſupported by the opinions and deciſions of men, who, at leaſt, ought to have been better informed, and who have raiſed an alarm which has nearly

nearly ſet Britain in a flame. The mutual confidence which, in every well-regulated ſociety, ought to exiſt betwixt the inhabitants of the country and thoſe in towns, has thereby been relaxed, and a degree of enmity created, not much inferior to what prevails betwixt hoſtile nations.

We have lately ſeen this ſpirit diſplayed in acts of open violence and outrage againſt bakers, millers, farmers, butchers, and other dealers in proviſions, not only in the metropolis, but likewiſe in many of our provincial towns. But it is to be hoped, that the wiſdom of Government, ſupported by the returning good ſenſe of the nation, will in future effectually prevent ſuch diſorders, and remove every impediment to a free internal traffic in grain, which alone can afford a regular and conſtant ſupply of proviſions, proportioned to the demand and the quantity in the country. In this northern climate, clothing is as much a neceſſary of life as food. If the merchant and retailer were perſecuted by law, or by the practice of the courts of juſtice, would the community be cheaper or better ſerved, by being ſent to the manufacturer? Moſt certainly the contrary effect would be produced. The manufacturer would not know how to proceed with his buſineſs; manufactures would receive a check; and the regular ſupply to anſwer the current demand in the market not arriving, ſcarcity would enſue, and with it an advance in price. In the preſent ſtate of ſociety, when the greateſt part of the population of the nation is crowded into towns, the preventing, or throwing impediments in the way of a free internal commerce in grain or other proviſions, is equally impolitic, and would be attended with the ſame evil conſequences, as ſhutting up all the retail-ſhops, and preventing merchants from purchaſing goods from one another, by which the price is ſuppoſed to be enhanced to the conſumer; for it is not within the compaſs of poſſibility, that the inhabitants of the large towns can be ſupplied with proviſions from the actual raiſer of the different articles of conſumption, no more than they can be ſupplied with every article of dreſs from the actual manufacturer: And this free commerce in grain, as well as every other article, ſo far from enhancing the price, by paſſing through different hands before it comes to the conſumer, has a quite contrary effect; of which we ſhall give the following ſtriking inſtance exactly in point.—In years of plenty, when wheat of our own growth nearly equals our conſumption, the city of London is moſtly ſupplied by corn-dealers,

who bring it from the country, and ſell it in the public market: it is there purchaſed by millers, who again carry it to the country, manufacture it, and bring it back to the London market, where the flour is publicly ſold to the bakers. In Scotland, in years of plenty, the bakers are moſtly ſupplied by the farmers, who carry the wheat into the bakers loft at the mill, at their own expence, where it is ground for the baker, and the flour carried home to the bakehouſe by the miller; the coſt of grinding not being one half of what is charged in the neighbourhood of London. Agreeable to the popular opinion, bread ought to be conſiderably cheaper in Scotland than in London; but the reverſe of this is the caſe. Upon comparing the price of bread in London, and the price of corn at the corn-exchange, with the prices of theſe articles in Scotland, it will be found, that bread is conſiderably cheaper in the city of London, in proportion to the price of wheat, than it is in Scotland *. We recommend the conſideration of this fact to thoſe who wiſh to throw impediments in the way of a free internal traffic in grain, by perſecuting thoſe who are engaged in that neceſſary branch of commerce.

Numerous aſſociations are going forward to accompliſh a reduction of prices, and reſolutions entered into not to purchaſe higher than certain rates condeſcended upon. Without inquiring whether ſuch meaſures are illegal or not, we muſt obſerve that they are groſsly unjuſt. Their object is to take from the ſeller a part of the money which his articles would have brought him at market, if no reſtraint had been impoſed upon its natural courſe; which is preciſely the ſame, as if all the ſellers were to combine not to diſpoſe of their articles, unleſs they received higher prices than the ſtate of the markets would give them. Under this laſt caſe, the law, it is preſumed, and very juſtly, would inſtantly puniſh them for ſuch a combination. Now, we know no difference between the caſes: by the one, it is intended to make the ſeller take leſs money for his article; and by the other, to make the purchaſer pay more than the level of the market warrants:—the conſequences are preciſely the ſame to the parties.

As

* At preſent, it is ſtandard bread, at the medium price betwixt houſehold and wheaten, that is baked in Edinburgh; whilſt, in London, only wheaten bread is baked.

As this ſubject is intereſting to every member of the community, we have been induced to diſcuſs it in this leading article. We have given our ſentiments, we truſt, with candour, though with firmneſs and truth; a line of conduct we are determined to purſue.

Before we are done, it is highly proper to recommend, that ſimilar meaſures ſhould be taken to ſupply the wants of the poor, as were laſt ſeaſon ſo generally practiſed. While we contend for freedom of trade and unreſtrained markets, as being the ſure method of inſuring a regular ſupply of proviſions, we as earneſtly recommend ſales, at reduced prices, to the lower claſſes, who, at the preſent rate of wages, cannot ſubſiſt themſelves and families. The philanthropy of the country was diſtinguiſhed, in the extreme, laſt winter; and, if Providence has viſited us with another ſhort crop, let it be the care and concern of all provided with the means, to alleviate, to the uttermoſt of their power, the diſtreſſes of thoſe who are unable to bear ſuch calamities.

EXTRACTS FROM PRIVATE CORRESPONDENCE.

SCOTLAND.

Extract of a Letter from Inverneſs, September 1.

Our harveſt is now general, and, if dry weather continue, the crop upon my farm will be nearly cut down this week. The crop, generally ſpeaking, is very light, as we have had no rain worth mentioning for a long time. From the ſcarcity of fodder, I ſhould not be ſurpriſed, that hay ſells in the Spring at 2s. 6d. per ſtone. Several fields of barley have been lately ſold from 16l. to 22l. per acre, which, in my opinion, will not yield above ſix bolls, or thirty-ſix buſhels: oats proportionally high: ſo you will ſee what value is put upon the fodder.

The turnip-crop on my farm continues in a thriving ſtate. Potatoes, though apparently good, are not likely to yield more than half their uſual return, which will bear particularly hard upon the poor people. Within theſe ten or twelve days, the whole of the oats in this neighbourhood have been covered with a black inſect; not a ſtalk but what carries thouſands of them. As yet, I ſee no injury done.

Extract of a Letter from a Gentleman near Perth, September 11.

Our wheats are very thin, though, in general, the ear is close set, and the grain of good quality. Oats are, in moſt places, a poor crop; and the quality very inferior to an ordinary average. This may be attributed, *in part*, to the wet ſeed-time, the weakly ſeed ſown, and the ſevere drought following, which, in many places, bound the ground, ſo that the plant could not forage as uſual. Alſo, all round this quarter, the oat-crop, in particular, has been, for many weeks paſt, infeſted with ſmall blackiſh vermin, which, I am perſuaded, muſt tend greatly to retard the nouriſhing quality from riſing up the ſtalk, to mature the grain; and, in my humble opinion, this laſt mentioned cauſe has not been the leaſt powerful in reducing the quality of the oats of this ſeaſon. Barley, in moſt places is far ſhort of its ordinary bulk; in ſome thin ſandy ſoils, it was almoſt parched up. However, on the whole, the grain is of a fine quality, from its having the benefit of ſuch an uncommon degree of ſunſhine in the courſe of the Summer. This remark, however, reſpecting the barley-crop, muſt be received with ſome little exception; and, indeed, all remarks of an agricultural nature, this ſeaſon, muſt be cautiouſly made; otherwiſe moſt erroneous concluſions would be drawn, the crop being ſo various, at leaſt in this quarter. On ſome of my fields, the variety of crops, from *good*, down to mere *nothing*, never appeared ſo as this year. In this neighbourhood, few peas are ſown; what little there is this ſeaſon, are what is called pretty corny, but little ſtraw. Turnips, wherever they brairded fairly, have ſtood out much better than could have been expected, conſidering the dryneſs of the weather; and now, with the refreſhing weather, promiſe a moſt luxuriant crop. I need ſay nothing about the ſtate of the paſture grounds. They are here, as in moſt other places, much barer than ever I ſaw them. I hope the fine rains we have had, will, even late as the ſeaſon is, produce ſome freſh vegetation, which would indeed be moſt acceptable, when fodder of all ſorts will be ſo very ſcanty for the Winter ſupply. Potatoes were, early in the ſeaſon, moſt promiſing; but I am ſorry to find the roots are not like the tops in that reſpect. I hope they will ſtill improve in ſize, though I have ſome little doubts on this head, from the appearance of freſh vegetation from ſome of the firſt formed potatoes at the roots of many of the plants. The ſhaws, however, in many places, are ſtill vigorous, though, in hollows, and by the river ſide, they are quite gone, from the effects of hoar-froſt, which we had here about ten days ago. Live ſtock, of all deſcriptions, in our markets, are a mere drug. Butcher-meat is much reduced—beſt beef, 5d.; mutton 4d.; and it is thought will ſtill be lower.—Inferior ſorts much

much under the above. I can ſay nothing at preſent as to the price of new grain, no market being as yet fairly opened. Oat-meal 2s. per peck; the quartern loaf is 1s. 3½d.

Extract of a Letter from the ſame Gentleman, October 6.

I now ſend you a note of prices in Perth market on the 3d inſtant, although as yet no very great quantity of grain has been offerred for ſale.

Wheat, 40s. to 43s. 6d. per boll.
Barley, 30s. to 36s. per ditto.
Oats, none in market.
Oat-meal, 2s. 2d. per peck.
Barley-meal, 1s. 6d. per ditto.
Potatoes, 1s. 8d. per peck of 32 lb.
The Quartern loaf, 1s. 3½d.
Beef, 4d. to 5½d. per lb. Dutch weight.
Mutton, 3d. to 4d. per ditto.
Lamb, 4d. per ditto.
Butter, 1s. 6d. to 1s. 7d. per lb. Tron weight.
Eggs, 9d. per dozen.
Hay, 1s. 8d. per ſtone.
Oat-ſtraw, 1s. per ditto.

In laſt week's newſpaper, I obſerved a ſtrange reſolution amongſt the good people in Edinburgh, reſpecting butter. Although I am a great enemy to all ſuch as demand extra profits on any article, in particular ſuch a neceſſary of life as butter is; yet I am ſorry to hear of any plan formed not to uſe this article. It muſt be evident to every perſon, in any degree capable of forming an opinion on the ſubject, that butter cannot be afforded this ſeaſon for a price ſhort of double the ordinary rate; otherwiſe thoſe who furniſh it muſt be ſoon ruined. I mention this only by the by, and beg you would take ſome notice of it in your next Number. The remarks I made in my laſt, on the crop, I can now confirm, having thraſhed part of my wheat, barley, and oats. The two firſt are of excellent quality, but the laſt vaſtly inferior. What of the oats I have had at the mill, has taken ſix firlots to bring one boll of meal: and I am ſorry to hear of even leſs returns than that. For about ten days prior to the 3d current, we had very indifferent harveſt-weather—rains every other day, and yet no material damage done. We have now again fine dry weather, which I hope will continue for ſome days. There is now a conſiderable degree of vegetation in the ground; and our paſture-fields greener than in June. No doubt, the quality of the graſs is vaſtly inferior to what grows in Summer; but ſtill it will prove of great benefit to the beſtial, and ſave what little fodder there is till Winter. Had we not been bleſſed with ſuch mild weather, the proſpect for Winter-forage would have been melancholy indeed. I am glad to add, that our potato-crop has greatly mended of late, and that turnips are ſtill improving faſt.

Since

Since writing the above, I hear that barley has been this day ſold ſo high as 42s. per boll.

Extract of a Letter from a Gentleman in Strathern, Perthſhire, September 22.

Strathern has, this ſeaſon, been particularly ſubject to the effects of the more than uſual drought; therefore, our crops cannot be called good. The failure is chiefly felt in barley. Peas and beans, for the moſt part, have not ſo much ſtraw as uſual, but plenty of good pods. Oats are very ſhort, the ear pretty well, and the grain of a good quality. Some, of an early variety, which had been manufactured, yielded not much leſs than meal for corn at the mill. Our wheat turns out better than was expected. The oats were lately much burdened with a black inſect; but I do not find that much harm is thereby ſuſtained. About the beginning of Summer they were ſeverely cut up by the grub-worm; but afterwards, three or four ſtalks ſprung up from thoſe apparently deſtroyed; and ſuch parts have turned out the beſt crop.

Turnips have, in a great meaſure, failed; though there are ſome good fields here. The paſtures were reduced to dreary waſtes during the long drought, but now begin to preſent the hue of Spring. Our hay-crop has proved very ſcanty; and, with the little ſtraw which this year's crop affords, makes me earneſtly hope for a favourable Winter; elſe I do not know what will be done with our ſtock.

I cannot ſay much about the price of grain; but I lately bought ſome old oats, at Perth, for which I paid 32s. Wheat is 55s.; hay 20d. per ſtone; and oat-ſtraw 1s. Cattle ſold pretty well at Falkirk Autumn tryſt; but the preceding markets in our neighbourhood were dull and low.

Extract of a Letter from a Gentleman in the South-Eaſt Corner of Berwickſhire, September 22.

I have lately had occaſion to travel through Northumberland, Durham, and part of Yorkſhire; and ſuch obſervations as occurred, thrown together as recollection, amid the hurry of harveſt-work, admits, are much at your ſervice. I left Berwickſhire in the end of Auguſt, ſome time after harveſt was begun here, and returned on the 12th of September, after an abſence of nearly three weeks.

I did not find the harveſt a bit farther advanced, than on this ſide Tweed, all the way to the vale of Tees, which divides Durham

Durham from Yorkſhire. In the noble tract of country from Tees to Knareſboro-foreſt, harveſt-work might perhaps be a week farther forwards than here, eſpecially with wheat, peas, and barley. In that fine turnip-diſtrict, vaſt quantities of later ſown turnips had entirely failed, and the land was working over again, probably for wheat. The earlier turnips ſeemed good; but almoſt uniformly broad-caſt: ſome few *rowed*, by the harrows only; but at ſuch ſmall intervals, as not to admit the horſe-hoe. On theſe lands, I obſerved, in a former journey, that a great part of the dung was harrowed up to the ſurface; and, conſequently, was in a great meaſure loſt, both to the turnips, and thoſe crops which are to ſucceed. The land ſeemed well pulverized; but by no means even tolerably cleaned from couch and other weeds. In this laſt excurſion, I obſerved ſome fields, in which the turnips had not ſucceeded, moſt diſgracefully covered by heavy crops of weeds, faſt running into ſeed, if not already ſeeding. The ſucceſſion ſeemed, on theſe *turnip*-ſoils—turnips, barley, broad clover for hay, wheat. Univerſally, a large proportion in perennial meadow, or graſs for hay: conſequently, theſe are never broken up for the production of heavy crops of grain and turnips; nor does the arated land ever derive the vaſt improvement of paſturage. Having, however, no opportunity of particular information, I know not how far this eternal jog-trot may be forced by tithes; but I do know, that it is imperiouſly continued by the total abſence of leaſes.

Generally ſpeaking, the inferior lands in Knareſboro-foreſt, where I was near a fortnight, have poor crops; and theſe are very much injured by the bad weather which occurred about the beginning of September. I ſaw wheat growing there, literally not worth harveſting, rent, ſeed, and labour out of the queſtion; but indeed on land which ought only to carry trees.

In Knareſboro-foreſt, almoſt univerſally, a good deal in the reſt of Yorkſhire northwards, and almoſt generally in Durham, and the ſouth of Northumberland, the oats were of the Tartarean kind. Thoſe I ſaw at the inns, and in the fields round Harrowgate, prejudiced me much againſt them, as they were ſmall-bodied, and very long tailed. They were likewiſe much mixed with wild oats; which, however, is an extraneous fault, owing altogether to bad huſbandry.

In the Yorkſhire harveſt-work, where I had occaſion to ſee it, each reaper made his own band, and bound his own ſheaf. This is contrary to the principle of the *diviſion of labour*, and ſeems not nearly ſo economical as our practice of band-winds, ſix, or even ſeven reapers, in two ridges, the middle reaper in each making the bands, and a *bandſter* behind, who binds and ſets up all the ſheaves.

The

The reaping which I attended to, near Harrowgate, was more cleanly taken up from the ſtubble, than any ever I ſaw in Scotland. Even on wheat-fields, gleaning did not ſeem worth attempting. Returning, however, through the fine country already mentioned, by Rippon, Northallerton, and Darlington, I obſerved many bunches of gleanings on their way home; but moſt of theſe were evidently pulled, and I ſaw the cottagers, in ſeveral places, buſily engaged in cutting off the roots from their gleaned wheat.

In ſpite of old cuſtom, I am decidedly an enemy to gleaning; it encourages idleneſs, when hands are wanted for reaping; it initiates the young into habits of pilfering, as I know parents often puniſh their children if they do not bring home abundant gleanings, which prompts them to ſteal, that they may loiter; it occaſions diſhoneſt reaping, that plenty may be left on the ground for the children and followers of the reapers. I never permit gleaning, till my crops are carried off the ground; and then, becauſe it is cuſtomary, the gleaners and my cattle may gather in conjunction. I once counted above eighty gleaners on a large ſtubble-field near Preſtonpans, in which the reapers muſt have committed immenſe waſte, to make it worth while for ſuch a multitude to glean. As well might a farmer ſcatter uncounted handfuls of money by the road, as he returns from felling his grain, as leave grain, or allow it to be left, waſtefully in the field, to be picked up, by non-induſtrious, though buſy poor. Let farmers, and all others, give of their abundance to thoſe who really need; but ſcatter not at random, you know not what, to you know not whom.

In this neighbourhood, (Berwickſhire near the ſea), a great loſs has been ſuſtained, in oats that were nearly ripe, when the thick weather came on at the beginning of this month. The necks of all the beſt pickles became black and tender, ſo that the wind and handling broke them off. I eſtimate the loſs, on ſeveral acres of my farm, at twelve buſhels the acre. Early oats eſcaped this injury; but were a good deal ſhaken about the middle of Auguſt, and are much diſcoloured by the thick weather. I do not obſerve much growth on the barley, or wheat, or peas, that were then cut. I have made ſome diſcoloured Angus oats into meal, which, after paying the miller, the Lord knows what proportion, produced 9 bolls of meal, from 10 bolls of oats; or 90 Engliſh ſtones of meal from 60 Winchester buſhels of oats, which is exactly 21 avoirdupois pounds of meal from the buſhel of oats.

So far as I can pretend to judge, the produce of grain on the good dry ſoils will be a fair average crop; and the grain, where not injured by weather, of excellent quality: But, on the clay lands, even the moſt fertile, the crop is thin; perhaps, generally

generally ſpeaking, it will not exceed half an average; on cold wet lands it is exceſſively bad, particularly early oats, which, on ſome, even fertile clays, are hardly worth reaping. Univerſally, except on ſome very favourable ſpots, the ſtraw is extremely ſhort; ſo that, on the whole, few farmers will have above half the fodder of an ordinary good growing year. Hay, conſequently, beſides being generally a light crop, is riſing faſt in price. At Berwick, it began in the rick at 16d., and fell to 10d. the ſtone of 24 libs.; now it is ſaid to have returned to 16d., and to be on the riſe. I ſold, four weeks ago, thraſhed hay, at the rick ſide, for 14d. the ſtone of 22½ libs. At Newcaſtle, I was told it began at 6l. and 7l. and is now 9l. the ton.

Wherever I have been, turnips have failed univerſally on cold lands, and very much ſo on later ſown dry ſoils. Even on the beſt ſoils, the early ſown turnips, though luxuriant in foliage, do not root by any means well: I think I have ſeen them nearly twice the diameter by this time of the ſeaſon.

If I may judge from what I ſaw in Morpeth market, on the 10th of September, fat cattle, ſheep, and lambs, are ſcarce; as great numbers, in a miſerable ſtate of leanneſs, were on ſale, and, I was told, brought full 6d. the pound. The fat, I ſuppoſe, are much exhauſted by the demand; the ſucceſſion has been prevented by the long drought; and graziers are puſhing off what they can, from the bad proſpect of Winter food.

Extract of a Letter from Thurſo, September 25.

I have, with much ſatisfaction, peruſed the three firſt Numbers of your valuable Magazine, which will ſoon find an extenſive circulation in this part of the country; and I hope your ſucceſs will be equal to the general utility of your laudable undertaking.

I ſee that you wiſh to be furniſhed with reports of the ſtate of the crops in the different diſtricts. I have the pleaſure to inform you, that, in the county of Caithneſs, the hay-crop has been abundant, and was got up in excellent condition. The corn-crops, in conſequence of the long continued drought, will be ſhort in fodder, but by no means deficient in grain, and that of excellent quality. The ſtate of harveſt affords the proſpect of a ſafe and ſpeedy concluſion, the weather being uncommonly favourable, and the reaping far advanced. On my own farm, in the neighbourhood of Thurſo, the corns were all got in, and *the barn-yard ſlap cloſed, on the 15th of this month;* and I think I may venture to ſay, that, by the 10th of October, not a ſheaf will be out in any part of this county.

Our

Our remote ſituation, no doubt, ſubjects us to certain inconveniences in regard to markets; and perhaps many intelligent men, in other parts of the kingdom, have formed very erroneous opinions and notions of the fertility of our ſoil, and the nature of our climate; but they ſhould not forget, that, in the oldeſt Scotiſh Law Book, the Regiam Majeſtatem, the Caithneſs boll is laid down for a ſtandard meaſure; and, as facts are ſtubborn things, I here give you a correct ſtatement, taken from the Cuſtom-houſe books of the port of Thurſo, of the quantities of grain and meal ſhipped off, of the growth and produce of Caithneſs, of crop 1799, which, being compared with the ſtate of other counties, in that ſeaſon of general ſcarcity, will convince your readers, that, in point of agriculture, this diſtrict is not ſo far behind as many ſuppoſe it to be.

Grain and Meal ſhipped off, viz.

	Bolls.
Wheat - - - -	36
Barley, bear, or bigg - - - -	6,847
Oats - - - -	2,472
Peas and beans - - -	12
Oat-meal, of 140 lb. avoirdupois per boll -	9,020
Barley-meal, of 156 lb. avoirdupois per do.	1,370
	19,757
Beſides ſeveral quantities, ſent partly over land, and partly in boats from different creeks, to the neighbouring counties, without Cuſtom-houſe diſpatches, not under - -	1,600
In all	21,357

You will obſerve, that not a boll was imported or brought coaſtwiſe into the county, and the inhabitants were plentifully ſupplied.

The Caithneſs boll of barley and oats is 5 per cent. better than the Linlithgow ſtandard.

Berwickſhire Quarterly Report.

The fine warm weather, which commenced in July, with the unremitted continuance of drought, made corn ſhoot prematurely into ear, and brought harveſt on much earlier than was expected: many farmers had begun reaping previous to the 20th of Auguſt, ſince which there has not been 20 days entirely free of rain; from the 3d to the 10th of September, it rained almoſt inceſſantly, by which the cut corn was greatly ſprouted, and even ſtanding corn,

corn, where fully ripe, was in many cafes ſprung, and very much diſcoloured.

Wheat, which occupied a ſmaller extent than uſual, is not equal to an average crop per acre; but the quality is in general good. The peas crop, which alſo occupied but a ſmall extent, had not a promiſing appearance at the beginning of this quarter, but recovered ſurpriſingly after the warm weather ſet in, and has at laſt turned out exceedingly productive. Oats are a very light crop, and, from the trials already made, do not promiſe to yield, per boll, a greater weight of meal than laſt year. Barley is good in quality, where not damaged in harveſting, but will come ſhort of an average crop per acre. Straw is every where greatly deficient in quantity, and much of it diſcoloured by the rains. In the lower diſtrict, harveſt is now nearly concluded. Reapers wages have been from 6d. to 8d. below laſt year; men being about 1s. 2d., and women 1s. per day, with victuals; though, one week, from the preſſing demand after a delay occaſioned by bad weather, they were as high as 2s. and 2s. 9d. per day.

Potatoes are in general ſmall, and not likely to turn out productive. They were ſtinted by the drought, and have, in many ſituations, ſent forth young fibres, each potato becoming a mother plant. Turnips, in general, are extremely thriving, and may be conſidered as better than an average crop. Young clovers met with a ſevere check from the drought: ſome few fields died away altogether: however, moſt of them have recovered a healthy appearance, though not ſo forwardly as uſual. The fallows, in general, are in fine order, and a few of them already ſown with wheat.

Hay, which proved a very light crop, was in moſt caſes extremely well got; prices from the rick were from 1s. to 1s. 4d. per ſtone of 22½ lb. Engliſh. The foggage, or aftermath, has this ſeaſon made but a very poor appearance. Paſtures ſuffered greatly from the drought; notwithſtanding which, ſheep and cattle kept their condition better than could have been expected; and, ſince the fields reſumed their verdure, ſtock of every deſcription has made a rapid improvement.

Markets for lean cattle were very dull in the beginning of this quarter; but ſince Dunſe Lammas fair, prices have rather been upon the advance. The demand for ſheep to the Engliſh market, has of late been conſiderable; in conſequence of which, prices have run from 18 to 24 per cent. above laſt year. Wool, in the lower diſtrict, ſold from 18s. to 21s. per ſtone of 24 lb. Engliſh, being about a ſhilling higher than laſt year; but the fleece, in general, weighed from 16 to 20 per cent. lighter. New corn has been ſelling at Berwick as follows; viz. wheat, from 60s. to 70s.; barley,

barley, from 38s. to 42s.; oats, from 26s. to 30s. per boll of ſix Wincheſter buſhels.—Butcher-meat at Dunſe, per lb. of 17½ oz., beef from 5d. to 6d., and mutton from 5d. to 6d.

September 30. 1800.

Roſs-ſhire Quarterly Report.

The conſtant and ſevere drought which prevailed during the months of June, July, Auguſt, and part of this month, though favourable in bringing forward the harveſt, has, in many places, been attended with the moſt pernicious conſequences. Oats, which is our principal grain, have ſuffered moſt; they are not half their uſual bulk, and it is found they meal poorly. Not above one third of them are ſtacked, the harveſt having been much retarded, for upwards of two weeks paſt, by wet weather; but, ſhould they eſcape injury from the weather, ſtill there muſt be a great deficiency, and will be found to prove, in quantity as well as quality, far below an average crop. Barley, though not bulky, may be pronounced a good crop upon the ground; it is of ſuperior quality, and a conſiderable part of it has been ſtacked without a ſhower. Wheat does not enter much into the preſent ſyſtem of farming in this county: the few farmers who raiſe that grain, were prevented from getting their uſual quantity ſown, by the rains in laſt Autumn; and a good deal of what was ſown was ploughed in the Spring. What remains, is very thin in the ground; but the quantity is ſo trifling, that it is ſuppoſed there is ſcarcely as much growing in the county, of this crop, as will ſow the next. Peas are below an average crop, in many places having totally failed from the drought; but they are not a crop of general attention. Potatoes will not be productive; and a great many of that valuable root have been prematurely conſumed by the poor people, who, for want of meal, began much ſooner to uſe them than uſual. It is diſtreſſing to ſee the patches of the poor cottagers ſo far exhauſted at this early period. Many families have lived ſolely upon them for two months paſt; and by thus taking them before they had attained any thing like a full crop, what they expected, at planting, would have ſerved their families till next crop, will not laſt beyond Chriſtmas. Turnips, where they have not totally failed from the drought, are a pretty good crop. Hay, in many places, was ſcarcely worth the cutting: it ſold from the field at 1s. per ſtone, and none can now be had under 1s. 6d. New oat-meal has been ſelling at 40s. per boll of nine ſtones, and barley from 40s. to 45s. per boll: But we have ſcarcely a market for grain at preſent; not ſo much for want of a demand, as for want of grain to ſell. No one will thraſh out at preſent, for fear of waſting their ſtraw before Winter,

ter, of which there never was ſuch a ſcarcity; four times the uſual price is offered for wintering cattle with ſtraw. Butcher-meat ſells from 3d. to 4d. per lib. and beaſts in condition meet with a market in proportion to theſe prices; but for lean, and young cattle, with which we are far overſtocked, we have no demand.——*September* 29. 1800.

Argyleſhire Quarterly Report.

From the coldneſs of the Spring, and the great drought of the Summer, our corn-crops this year are not ſo bulky as uſual. But what is wanting in ſtraw, is more than made up in grain; ſo that, upon the whole, the crop may be conſidered as a good one, and more than ſufficient to ſerve the county, if much of the bear be not diſtilled. As we had no rain till the 20th of September, all the bear, and about half the oat crop, was got in before the weather broke. From the ſcarcity of water for grinding (a very uncommon thing in this county) little of the grain has been manufactured till within theſe ten days, in which time bear-meal has fallen from 20d. to 14d. the peck, and oaten meal from 3s. to 1s. 10d.

The potato crop is of an excellent quality; firm and dry, but in moſt ſoils not ſo large and numerous as uſual. Few of the potatoes have yet been dug or ſent to market. At Campbeltown, they ſell at a ſhilling the peck. At Inverary, the Duke of Argyle, who raiſes large quantities, ſells them at the low price of former years.

As the cattle were low in Spring, and the graſs late of ſpringing up, the quantity of butter and cheeſe made, is leſs than uſual. Butter ſells at 14d. and cheeſe at 5d. the lib. Butcher-meat from 4d. to 5d. where it is ſold by weight: but, through the county in general, cows and ſheep are bought whole and alive. There is little demand for fat cattle, and it is thought they muſt be ſold much lower than for ſome years paſt. Sheep farmers, who ſold their wedders early, got nearly the price of laſt year, a little under or over 20s. But thoſe who were laſt of ſelling, made a worſe market. Wool has ſold conſiderably higher than laſt year; a great part of it about 8s. the ſtone.

The quantity of herrings taken this ſeaſon on the coaſt of this county (which commonly makes a conſiderable part of its revenue) has not yet been ſo conſiderable as for ſome years paſt; nor are the laſt accounts from the herring-buſſes that have gone to the North Iſles, ſo flattering as could be wiſhed. But as the moſt of the fiſh is commonly taken after this time, there is yet no reaſon to deſpair of a good fiſhing. The herrings, ſold freſh along the coaſt, have been generally about 3s. a hundred.

At preſent (in the beginning of October) our weather is wet and cold. We are thankful for the good weather we have already got; and truſt in a gracious Providence, that the year will be crowned with his goodneſs.——*October* 2. 1800.

Perthſhire Quarterly Report.

The county of Perth is ſo extenſive, that the ſtate of the crop in one diſtrict can hardly be accounted a true criterion of the general ſtate of the harveſt over the whole; yet, ſo far as the ſituation of this county has fallen under my obſervation for ſome weeks, I am deſirous to acquaint you; that you may judge in what degree it may be of uſe to the public, through the medium of your Miſcellany.

The extreme drought laſt Summer, and part of this Autumn, had parched the ground ſo much, that two kinds of ſoil have proved very unproductive; the light ſand and gravel, and alſo the ſtiff coheſive clay or till. The firſt was too porous and open, to reſiſt the influence of the ſeaſon; the laſt was of ſo cloſe a texture, that it became hard as a ſheet of iron, and locked up all the principles of vegetation. All our crops have failed in both theſe kinds of ſoil. The ſtraw is extremely ſhort, inſomuch that, in a variety of inſtances, it was impoſſible to gather any by the ſickle: the people were obliged to pull the crop, as they do lint, or to cut it down with the ſcythe. The grain is generally meagre and thin; being blanched under a burning ſun, before the uſual ſeaſon of ripening.

Wherever the crop grew from old lea, or from a deep loamy ſoil, or on level haughs, where the moiſture was abundant and not eaſily exhaled, or in the narrow glens of the Highlands in the vicinity of mountains, which attracted clouds and occaſional vapour, being cheriſhed by theſe favourable circumſtances, it has proved abundant, the grain well filled, and the ſtraw no ſcantier than uſual.

Upon the whole, however, the inſtances in which the crop has been as good as uſual, do by no means counterbalance the inſtances in which it has failed; ſo that, in my opinion, taking the whole county at an average, we may be ſaid to want a third part of what is eſtimated a fair crop.

Since the middle of September, the weather has broke, which is a critical ſeaſon for the greater part of this county; and if the rains continue, which is very likely, from the long tract of dry weather lately paſt, we may loſe a great part of what remains ſtill in the fields.

It

It is to be hoped, that Government will adopt early and effectual meaſures this ſeaſon, to ward off the preſſure to be dreaded by the ſcarcity to be expected from the failure of the preſent crop. Importation is expenſive, owing to the ſucceſſive and accumulated profits always derived from grain, by every hand through which it muſt paſs, before it can reach the conſumer. Importation may eventually prove extremely precarious and uncertain, by the failure of crops in other countries, of which our experience, laſt ſeaſon, is an irrefragable proof. Why not do the beſt we can at home, and huſband the grain we have, with the moſt prudent economy?

Government did, laſt ſeaſon, adopt the expedient, which they had formerly fallen upon in ſimilar caſes, and which they may probably think upon again in the preſent ſituation of the country, *to prohibit the diſtillation of grain into ſpirits.* This expedient is well meant; but it is only doing things by halves, or rather doing nothing at all, when you take the loſs of revenue into the account.

So long as there is an unbounded licenſe to malt, all the reſtrictions to diſtil, are nugatory and ineffectual. Laſt ſeaſon, almoſt the whole of our home-grown barley, and a great deal of our imported barley, was converted into malt, and every perſon in this part of the kingdom, even every ſchool-boy, knows that four fifths of this malt was made into whiſky, in ſpite of all reſtrictions to the contrary, and in abſolute defiance of law. Government did not, perhaps, foreſee this malverſation, occaſioned by a colluſion between the maltſters and the ſmugglers; and, therefore, they ſtand excuſed by every well-diſpoſed man. Thoſe at the helm of affairs, to whom we look up with anxiety for relief, no doubt expected that malting might go on, and, at the ſame time, that it was poſſible to ſuppreſs diſtillation. But every time they have calculated on this poſſibility, it has failed; and if they ſhould try the ſame expedient fifty times, it will fail as often.

It is ſo eaſy to elude the law in this reſpect, that no human prudence, no human ſanctions, can guard againſt the treſpaſs. Allow me to malt to any extent I pleaſe, and to diſpoſe of that malt to whom I pleaſe; having ſufficient capital, I engage fifty, or as many hundreds of pennyleſs beggars, who underſtand diſtillation; I provide them with money, to purchaſe apparatus on a ſmall ſcale; I ſell them malt; they retire into woods and dens, and the crevices of rocks; into iſlands, and ſequeſtered glens and mountains. If they are ſeized by the officers of excife, and ſued before the Juſtice, they have nothing to loſe; if they eſcape, which is often the caſe, I receive their ſpirits in exchange for my malt, and by this gainful nefarious traffic, I make cent. per cent. of my money, as I pay no duty but that for malting, and a trifle to theſe lawleſs hirelings.

This is no new or ideal ſcheme of injuring the commonwealth, which an honeſt man ought not to ſuggeſt. It has been followed almoſt openly, during the time of our greateſt diſtreſs, within theſe twelve months paſt.

A remedy might be eaſily ſuppoſed; but it is of no avail to develope the evil, or to point out the remedy, unleſs our Legiſlators think ſeriouſly of putting a ſtop to ſuch a glaring miſapplication of human food.—*October* 2. 1800.

Morayſhire Quarterly Report.

One fourth of the grain in this county is ſtill uncut, and a conſiderable part of what is cut remains in the fields. The weather has been unfavourable for eight days paſt; and more rain will injure the wheat and barley much: hitherto, both are free from ſpringing.

As one half of our land conſiſts of ſandy ſoil, a fourth of carſe clay, and one fourth of free rich loam, the deficiency of corn and fodder on the two former, from cauſes evident to every farmer, is beyond precedent ſince the year 1781. Wheat is not ſuppoſed to average more than five, and barley four and a half bolls per acre; but both, if fairly got in, will be of exceeding fine quality. Oats are ſtill more deficient in quantity, as well as quality. For weeks previous to their arrival at maturity, this grain was infeſted by an inſect, which, placing itſelf on the ſtalk and bearers, weakened both, and evidently prevented the pickle from receiving that ſmall nouriſhment which the parched earth was little able to afford. Of laſt crop, this county ſpared many hundred bolls of oats, equal in quality to any, and ſuperior to moſt in Scotland: It is doubtful if crop 1800 will do more than ſupply ourſelves. Potatoes are a poor crop, but the quality is good; and as farmers, who were in the practice of feeding cattle when worth but 4d. per peck, will, thus, when likely to ſell at 10d. to 1s., be induced to bring them to market, it is probable that the inhabitants will find a ſufficiency both for food and ſeed.

No wheat or oats are yet thraſhed out, nor prices fixed; for, while the weather continues ſuch, that cattle can find even a ſcanty maintenance in the fields, farmers will not be eaſily induced to thraſh out, when provender is in ſuch requeſt. Barley and ſtraw have ſold on the ground for 3l. per boll. Hay gives 2s. per ſtone, and more likely to riſe than fall in price. Brewers are paying 35s. to 42s. per boll for barley; but little has been grinded down for meal, as the markets are yet ſupplied withold grain, bought up by the magiſtrates and

and incorporated trades of Elgin and Forres, from farmers and corn-dealers, at 28s. to 36s. per boll, and ſold according to its produce in meal, to keep them from loſs; ſo that probably in no county of Scotland, except Caithneſs, were the inhabitants ſo cheaply furniſhed with meal.

For two or three weeks paſt, cattle of all deſcriptions have met with a ready ſale, but at prices ſo low, that money will be loſt by the graziers, who ſtill think themſelves fortunate to get clear-handed, conſidering the want of Winter keeping. Turnips, although greatly improved during the laſt ſix weeks, are rooting poorly, and are ſtill far under an average crop. Beef and mutton ſell at 2½d. to 4d. per lib., and not likely to alter before Chriſtmas.

The Morayſhire barley and oat firlot contains 32 Scots pints.
Wheat ditto, 22 ditto.
Hay, 20 lib. Amſterdam per ſtone.
Potato, 32 lib. do. per peck.
Beef, 16 oz. do. per lib.

Five firlots of oats go for a boll, when ſales are made in the county.

Few peas or beans are ſown in Moray; and both are this year a bad crop.——*October* 3. 1800.

Extract of a Letter from Grangemouth, 29th September.

There are yet about two thirds of our crop in the fields: what is ſtacked, in general, bulks ill. Barley is the worſt crop, and in quantity will not yield more than half of an ordinary year's crop. Wheat is middling, and will not fall much ſhort. Oats were very thin on the ground, and ſhort in the ſtraw, but will give well in the mill, and exceed the produce of laſt year, though they are not above three fifths of a crop. Beans are ſtrong on the ground, but will not yield well in the barn-floor: they are, however, a better crop than laſt year. Peas are a very good crop, and will be equal in quantity to any ordinary year. The quality of the whole will be good, if we have a continuance of good weather to get well in. Theſe are, at preſent, the general opinions reſpecting our harveſt; but, until it is all brought in, it is not eaſy to form a juſt idea of the quantity. Few farmers expect half their uſual fodder. The crop of potatoes has failed very much. Prices, we are of opinion, will remain much as at preſent, for a month or two; but, thereafter, we doubt they will go higher. Annexed, you have the preſent prices of grain, which are very nominal. When we get any farther information reſpecting the ſtate of our crop, it ſhall be communicated.

Wheat,	40s. and 45s.	New, 50s.	Per boll Stirlingſhire, which is 7½ per cent. above Linlithgow.
Ditto foreign,	42s. — 50s.		
Barley,	30s. — 37s.	New, 42s.	
Oats,	25s. — 30s.	Fine, 32s.	
Beans,	26s. — 30s.	New, 38s.	
Peas,	28s. — 31s.		

Oats, 2s. per peck in retail.

Extract of a Letter from Dunkeld, October 2.

I ſhall do myſelf the pleaſure of communicating ſuch information as has fallen in my way. The ſhowers of rain in June, July, and Auguſt, only wet the ſurface; but, during September, a great deal of rain has fallen. Along Strath-Tay, as far as the junction of the Tummel, and along the Tummel, and around Blair, the rains were frequent in Auguſt, and the crops of grain better than in this quarter.

In the above tracts, the barley crop may be conſidered as remarkably fine, and the oats ſhort, but good in quality. Potatoes are greatly benefited by the late rains; flax tolerable; and, as for turnips, few are cultivated, except it be upon the farms of proprietors.

From the junction of the Tummel with the Tay, all the way to Perth, the crops have ſuffered much from the dry weather. They are of very little bulk, but generally good in quality. From Dalnacardoch, down the vale of Athol, and along Strath-Tay to Perth, the crop is cut down, and almoſt got in to the ſtack-yard, though much retarded by the rain, which falls every day. A great ſcarcity of hay, and other fodder. Fat cattle are on the riſe; and the demand for lean ſtock is increaſing. The paſtures are now pretty good. The oats ſuffered much from a black inſect, particularly thoſe upon light ſoils.

State of the Markets.

Hay, 1s. 6d. to 1s. 8d.; ſalt butter, 22s. to 22s. 8d.; cheeſe, 8s. to 9s.; all per ſtone of 22 lib. Freſh butter, 18d. per lib.; beef, 4d. and 4½d.; mutton, 3½d. and 4d.; oat-meal, 2s. 4d. per peck; wool, 12s. to 14s. per ſtone; oats, 28s. to 30s. per boll; but little of this crop yet brought to ſale.

Extract of a Letter from a Farmer at Strathmore, October 2.

Very few trials have been made of this new crop; as the apparent ſcarcity of fodder is ſo great, that thraſhing will be delayed as long as poſſible. We are well advanced with harveſt-work, and nearly all in the ſtack-yard; but, in the eaſtern parts of the county, they are much

much behind, though, in ordinary years, they are always before us. Turnips are generally good. I never had better. Oat-meal ſells at 2s. 6d., and barley-meal at 1s. 6d. per peck. Barley for malting has been ſold from 45s. to 48s. per boll, but not much to be got at any price. Potatoes are a bad crop, which will prove a material loſs to the lower claſſes. Cattle have a tolerably quick ſale, but they are not plentiful; I mean good ones.

Extract of a Letter from a Farmer in Teviotdale, October 3.

The corn-crop, in the low diſtrict of Roxburghſhire, will not average that of laſt year in the number of bolls; but, from the ſuperior quality, will be fully equal (oats excepted) in point of the means of ſubſiſtence. From the beginning of September to the 10th, we had almoſt conſtant fogs, breaking into ſhowers, which damaged the corn very much, cauſing a great part of it to ſprout, whether cut or uncut, particularly wheat. In the higher diſtricts, the harveſt is already completed, and will yield more than double of laſt year's produce, both in quantity and quality. Turnips, upon which we place great dependence, may be ſaid to be a full crop, except thoſe ſown upon clay ſoils, which have completely failed. From the great deficiency of fodder and graſs, recourſe will be had to them early. It is expected that they will bring high prices.

Grain ſtill keeps high. Wheat, from 62s. to 75s. 6d. per boll of 6 buſhels; barley, 38s. to 50s.; oats, 30s. to 37s. per boll of 7½ buſhels. No peas or beans in the market. Beef, 4d. to 6d.; mutton, 3½d. to 6d.; veal, 5d. to 7d.; lamb, 3d. to 5d.; pork, 3d. to 4½d.; all per lib. weight of 17½ Engliſh ounces.

Potatoes, which in the beginning of Summer flattered our hopes, will turn out an ordinary crop, being ſtinted in their growth by the ſevere drought. Short wool was ſold from 20s. to 28s.; ſome very fine, as high as 32s.; long ditto, 18s. to 21s. per ſtone. Butter 18d. per lib. of 24 ounces; and in firkins of 56 lib. avoirdupois, from 55s. to 63s. As to cheeſe, no price is yet fixed, but from 10s. to 12s. per ſtone is expected. Hay was a very light crop; but we have ſmall demand for that article, unleſs during a ſevere Winter. Oat-meal is 4s. per ſtone, but expected lower next week.

Extract of a Letter from a reſpectable Houſe in Glaſgow, Oct. 3.

We have had a conſiderable import of flour and wheat from America; not leſs than 8000 or 9000 barrels of flour, and 16,000 bolls of wheat, of excellent quality, and in good condition. The canal being ſhut up on account of the great drought,

little grain from the eaſtern coaſt has been received for theſe two months paſt. We beg leave to ſay, that all wheat ſold here by meaſure, is by the Linlithgow firlot; and that all barley, oats, and beans, that come to this market by the Canal, are ſold by the Stirling meaſure, which is 7½ per cent. larger than Linlithgow meaſure. There are four counties within five miles of this city, and all their meaſures are different, which gives us a great deal of trouble. Stirling is 2½ per cent. larger than Lanark; Renfrew is 2½ per cent. larger than Stirling; and again, Dumbarton is 2 per cent. larger than Renfrew. Would not our Legiſlators do well to make all meaſures of one ſize, which would be a great benefit to the trading intereſt of the kingdom?

The wheats in this neighbourhood were thin upon the ground, but will turn out well from the ſtraw, and are of excellent quality. What has already come to market, weighs from 60 to 62 lib. per Linlithgow firlot. Barley is alſo fine in quality, and ſuppoſed to be a good crop; weight from 18 to 19 ſtone Engliſh, per Stirling boll. Oats are but light upon the ground; and all that were early got, are only middling in quality. Late crops are better; beans and peas a fine crop. As more than one half of our crop is ſtill in the field, we are afraid it will ſuffer conſiderably, unleſs the weather change ſoon. Potatoes are fine in quality, but not very luxuriant in the field. The hay crop has not turned out well; and the paſture and the meadow graſſes have been greatly hurt by the long drought. Fodder will be ſcarce. Fat cattle are ſelling well, and bring high prices.

Preſent Price of the following Articles:

American wheat,	50s. to 52s. per boll of 240 lb.
Dantzic ditto,	50s. — 54s. per meaſure.
Hamburgh do.	48s. — 50s. per do.
Engliſh do.	45s. — 50s. per do.
Scotiſh do.	40s. — 50s. per do.
New do.	42s. — 48s. per do.
Engliſh barley,	30s. — 38s. per do.
Scotiſh do. new,	36s. — 40s. per do.
Baltic oats,	24s. — 30s. per do.
Engliſh do.	28s. — 36s. per do.
Beans of all ſorts,	30s. — 40s.
Peas ditto,	30s. — 35s.
Oat-meal,	24s. — 30s. per boll of 140 lib.
Ditto new,	32s. — 35s. per do.
Hay,	1s. — 1s. 2d. per ſtone.
Beef,	6d. — 8d. per lib. tron.
Mutton,	6d. — 9d. per do.
Bear-meal,	16d. — 18d. per peck.
Peas-meal,	18d. — 20d. per do.

Inverneſs

Inverneſs Quarterly Report.

THE fears formerly expreſſed reſpecting the crop, are too well verified: for, owing to the extreme drought, it is likely to fall ſhort of an average. The wheats will not return a quantity equal to the conſumption of the country. Barley, on the whole, comes neareſt to an average crop. Oats are defective, both in quantity and quality, and peas very indifferent. Fodder muſt be exceedingly ſcarce, and hay, conſequently, high in price. Potatoes, though in general looking well, are much complained of. I have heard of no grain ſold at fixed prices, except barley, at 42s. and 48s. per boll. Oat-meal ſells at 2s 6d. per peck of 9 lib. Dutch; beef and mutton 3d. and 4d. per lib.

The firſt part of our harveſt was favourable; but, ſince the 20th September, we have had very broken weather, and a conſiderable part of the grain is ſtill out. The Highland diſtricts of the county did not ſuffer ſo much by the drought as the lower parts; for, in the former ſituations, the crop, upon the whole, is thought fully equal to that of ordinary years. The price of lean cattle is very low. ——*Oct.* 4.

Eaſt-Lothian Quarterly Report.

THE dry ſultry weather which commenced early in the Summer, and which we noticed in laſt Report, continued with unremitting ardour, accompanied frequently with dry parching winds, till about the end of Auguſt, when the wind, ſettling in the eaſterly points, brought on a tract of extremely damp weather, being a continued drizzling miſt, known in this country by the name of an *eaſterly harr*. As this damp weather was accompanied with a conſiderable degree of heat, and at the ſame time a dead calm, it occaſioned ſome damage to the crop that was cut, particularly to the wheat, barley, and beans. Even in uncut barley and wheat that were completely ripe, ſeveral of the grains appear to have vegetated, though not in the leaſt lodged. The appearance of the oats is alſo hurt by the wet weather: being moſtly ripe, and uncut during that period, they are much diſcoloured with the rain. The long continued drought had withered up every pile of graſs on the paſtures, and ſtunted the growth of every plant under cultivation; and, before the rain came, the crop was too far advanced to receive any advantage from the moiſture. If the Autumn of laſt year had been favourable for putting in wheat in proper ſeaſon, it is probable the crop of that grain would have been abundant; for,

for, being a native of a warm climate, it requires a hot ſun to bring it to perfection, and conſequently the wheat of this crop is of a remarkably fine quality. The thick ſet woolly-eared kind, which, laſt ſeaſon, owing to its retaining much moiſture about the ear, was more defective than the kinds with thin ſet ears and ſmooth chaff, is this year reckoned ſuperior, and, in the general run of ſeaſons, will be found to be the moſt productive of the two, and beſt ſuited to the ſoil and dry climate of Eaſt Lothian. But although the wheat, this year, is of the beſt quality, it is thin upon the ground, owing to the bad tilth of the ſoil, occaſioned by its being drenched in moiſture laſt ſeaſon, and the ſevere droughts ſucceeding in this, which rendered the ſoil ſo hard, as completely to prevent the plants from tillering. When therefore we take into conſideration the ſmall quantity of wheat ſown, its thinneſs on the ground, and deficiency of bulk in the barnyards, we are of opinion, that the crop of this year will fall far ſhort of the produce of an ordinary year.

The crop of barley is extremely various. On ſome damp free ſoils, it is a middling good crop; on dry bottoms, and on ſtrong lands, indifferent; and on the lands that were much ploughed in the Spring, or late of ſowing, it is moſt wretched. The quality of this grain, on the ſtrong ſoils that were early ſown, is fine, as alſo on the free dry ſoils, if not prematurely ripened with the drought; but the quality of late-ſown barleys, that were not ripe when the wet weather ſet in, will prove very indifferent. Upon the whole, the crop of this grain may be eſteemed below mediocrity. Beans are not half a crop, ſhort in the ſtraw, thin on the ground, and not well podded. They were much hurt by an inſect that covered the leaves and upper part of the ſtem, in the end of Summer and beginning of Harveſt, and have alſo ſuſtained damage from the wet weather, having been moſtly cut when it came on. The oats in Eaſt Lothian, this ſeaſon, are certainly the worſt crop ever remembered by the huſbandman; ſhort in the ſtraw, thin on the ground, and of a wretched quality; the grains being ſmall, huſky, and long-tailed: and to all appearance, as well as from the trials that have been actually made, on an average, they will not produce above fourteen pecks of meal per boll. The ears of this grain, in moſt fields, during the month of Auguſt, were covered with dark-coloured inſects, which clung in numbers about each grain, and probably hurt the crop, though their depredations were not apparent. In a field after Summer fallow, on a clay ſoil, the following uncommon occurrence was obſerved. The crop looked well in the early part of Summer; but in the month of July, when eight or ten vigorous ſtems, from ſix to eight inches long, had puſhed out from one ſeed, a great number of theſe vigorous plants were noticed going into decay. Upon

on examining their roots, they were found totally deſtroyed by a worm or maggot, which had alſo eaten out or corroded the heart of the ſtems. All theſe plants completely decayed before harveſt, inſomuch, that the field will not yield five bolls per acre.

Turnips have in general failed through the county. In many fields, the ſeeds never vegetated, for want of moiſture; and in others, the ſevere and long continued drought rendered the plants ſickly, when they were attacked and deſtroyed by a number of caterpillars and inſects of various deſcriptions. In many fields, they have indeed eſcaped, and may turn out a middling crop; but, upon the whole, the cattle fattened in the county during the courſe of the enſuing Winter, upon theſe nouriſhing vegetables, muſt be few, when compared with the numbers fed off in an ordinary year.

The paſture graſs being completely burnt up through the Summer, little milk and butter was produced, and many of the fattening cattle were hurried to market before they were fully fed. This occaſioned a glut in the butcher-market for a period: but they are now growing ſcarce, and prices on the advance. Good fat will bring 7s. 6d. and 8s. per ſtone, ſinking the offal. Owing to paſtures being gnawed to the roots, by the ſtarving cattle, in the time of the drought, the fields have now an uncommon verdure, every pile of graſs being expoſed to the eye; but this more in ſhow than in reality. Little or no clover was cut a ſecond time this ſeaſon; at any rate, the deficiency of the Summer graſs cannot now be made up.

To conclude: We cannot view the deficiency of the crop, both with reſpect to fodder and grain, in the half-filled barn-yards throughout the county, without putting every individual on their guard, by a rigid and well-timed economy, to remedy the evil as much as lies in their power: for as the price of every commodity depends upon the demand and quantity at market, it is only by diminiſhing the conſumption, that, in the event of ſcarcity, the prices of grain can be kept moderate; and it will undoubtedly be found, that every reſtriction on its free circulation, and internal commerce, ſo far from being of ſervice to the community, in reducing the price of grain, will ultimately have the contrary effect. ——*October* 6.

Tweedale Quarterly Report.

The general face of this county being hilly, naturally points out the ſheep-huſbandry, as the moſt eligible mode of farming for it; yet, though

though ſheep is our ſtaple commodity, there are few farms on which the plough is not leſs or more employed, and many are occupied equally in both ways. The produce, in ordinary years, exceeds the conſumption of the inhabitants; and conſiderable quantities of barley and oats are ſent to Edinburgh, and other places.

Laſt year was an exception, as, from the failure of the crop, the greateſt part of ſeed-oats were purchaſed from the coaſt-ſide, and alſo much of the grain needed for bread during the Summer months. The backwardneſs of the ſeaſon, and high price of ſeed, prevented the farmers from ſowing the uſual quantity of grain for the current crop, and occaſioned a greater portion of the land, than common, to be occupied by potatoes and turnips. The latter, where ſown in a regular rotation, and with a proper quantity of dung, promiſe to be a good crop; but potatoes, under the beſt culture, do not appear to be near ſo prolific as in former years. The young potatoes vegetated after the rains, and ſet out freſh ſhoots, though ſtill adhering to the parent ſtem, which, in many caſes, produced potatoes about the ſize of large peas. The crop is nevertheleſs now evidently improved.

The month of April was friendly to vegetation; but the ſucceeding months turned out ſo much the reverſe, that both corn and graſs were greatly hurt. The drought about the middle of July became ſo violent, as almoſt to annihilate the paſtures; yet ſtill the early ſown grain was not ſo much hurt, though what was late ſown ſuffered greatly.

The hay or ſown graſs turned out a middling crop, producing, in many inſtances, 200 ſtone, of 23 Engliſh pound, upon the acre: but, where eaten in the Spring, or where raiſed upon cold ſtiff ſoils, was, in many caſes, hardly worth the cutting. It is very common to eat the hay-fields, during the Spring months, with ewes, when lambing, as they give a ſeaſonable ſupply at that critical period.

Sheep, notwithſtanding the drought, were as good as in common years. That ſpecies of ſtock agrees better with heat than black cattle; the latter having ſuffered ſeverely, both in reſpect of the quantity of milk given, and in the degree of fattening, when intended for the butcher. The lambing ſeaſon was excellent, and the crop of young lambs as good as could be wiſhed.

The oats, peas, and even the bear, where ſown early, have turned out middling well; but the late grains, eſpecially of thoſe who were fooliſh enough to ſow their own froſted ſeed, are poor indeed. The bear on deep ſoils is a middling crop; on ſtiff land, very indifferent. Peas, of which there is a large quantity ſown, the land being moſtly new limed, are good; unleſs

unleſs in thoſe parts where the extreme drought got the better of them before they were filled. From trials made, oats and barley appear very ſmall; and, at the mill, the former does not yield above 7 ſtones of meal to the boll, containing 128 Scots pints. Upon the whole, what with the limited ſowing, and the effects of a backward ſeaſon, this county will be conſiderably below an average crop.

The harveſt, that is to ſay, the cutting of the crop, is nearly over; but a great portion is ſtill ſtanding out. What is brought in, is far from being bulky; and a ſcarcity of fodder is ſeriouſly feared, the appearance of which excited every farmer to cut as much boggy coarſe hay as poſſible.

No regular market for grain has been in this county during the Summer; the ſupplies having come from Leith, and conſequently, the prices regulated by thoſe of that port. A conſiderable quantity of the grain imported by the Aſſociated Societie came here; but the price has not been much leſs than of that which was bought by dealers from the merchants. Preſent price of oatmeal, 1s. 10d. per peck; bear-meal, 1s. 6d.; pot-barley, 3d. per lib.

Little wheat is raiſed in this county, that article being brought from other places, and has, through the Summer, coſt 3l. per boll of 90 Scots pints. Butter has been 13d. and 14d. per lib. of 23 ounces. Cheeſe of cows milk ſold green at 4d. and 5d. per ſame weight. The price of ewe-milk cheeſe not yet fixed.

Beef and mutton have ſold, for this ſome time paſt, at 6d.; lamb rather lower. Wool, per ſtone of 23 lib., from 8s. to 9s. The market was dull at the firſt; but, towards the end, the merchants purchaſed more freely. The ſheep here are moſtly of the black-faced breed, and the wool coarſe; attempts to introduce the fine woolled ſheep not having ſucceeded.

Wedder and ewe hogs (ſheep of a year old) were ſold at Linton market, from 10l. to 15l. per ſcore of 21. Holding lambs, or thoſe bought for ſtock, from 4s. to 6s. each. Fat lambs, to the butchers, from 5s. to 10s. according to weight and quality. Stock ewes from 8s. to 10s. Fat cattle from 7s. to 8s. per ſtone, ſinking the offal. Lean cattle, from the ſcarcity of fodder, not much in demand. Half-fed beaſts, for laying on turnip, ſell well; but no ſale for horſes, unleſs they are very good.

October 2.

Haddington, October 10.

The weather, for a month paſt, has been variable, and harveſt-work has gone on very unpleaſantly. Except a few fields, the corn

is all cut down; though, on ſeveral farms, a conſiderable quantity remains in the ſtock. Shearers were very ſcarce during the throng of harveſt, which occaſioned wages to riſe to 2s. 6d. per day, beſides maintenance.

Gifford Autumn fair, on Tueſday, was well ſupplied with cattle, generally in good order. A number of purchaſes were made, though a conſiderable quantity were driven home unſold. Prices may be rated at from 7s. to 8s. per ſtone, ſinking the offal. The ſhew of horſes was indeed indifferent, and few ſheep were ſold.

At our market this day, the prices were as follow: —Wheat, which, in general, is of excellent quality, but damp from the wetneſs of the weather, from 35s. to 54s.; barley, from 34s. to 41s.; and oats, which, upon the whole, are only tolerable, from 26s. to 34s.—all per Linlithgow boll.

At a meeting of heritors of the pariſh of Preſton, in this county, September 2d, a report, from the committee appointed laſt Winter, to conduct the ſale of meal to the poor at reduced rates, was laid before them. From the report it appeared, that 128 families had been regularly ſupplied with meal, at prices very little higher than thoſe of ordinary ſeaſons; and that coals had been furniſhed to the moſt neceſſitous poor, free of all expence, during the laſt inclement Winter: Alſo, that the ſum of 738l. 8s. 4d. had been expended by the committee, in the purchaſe of grain, for which, after being manufactured into meal, 387l. 15s. 6½d. had been received. The heritors approved the ſaid report, and directed that a piece of plate ſhould be preſented to one of the members of the Kirk-ſeſſion, who had taken extraordinary trouble in conducting the buſineſs.

Mid-Lothian Quarterly Report, from July 1st, to September 30th, inclusive.

The intenſe drought, remarked in the report for the preceding quarter, has continued, with little intermiſſion, during almoſt the whole of this, there having been no ſhowers, to any effect, till about the 5th of September, when rain, preceded by two or three days fog, ſet in, and continued for four or five days together, which did indeed ſome damage to ſuch corns as were then cut in the fields; but, on the other hand, was highly beneficial to the paſtures, and to the potato-crop, both of which had declined greatly; alſo to the aftermath of the hay, which, till then, was altogether at a ſtand. In the end of July, and beginning of Auguſt, the weather was uncommonly warm, which, conjoined with the exiſting drought, had the effect to bring on the harveſt much ſooner than was expected,

pected, and even before the ear, in many inſtances, was properly filled, particularly on all dry and gravelly ſoils, which, of courſe, from this premature ripening, have produced a ſhrunk grain and ſcanty return. This has been the caſe, more or leſs, with grain of every deſcription, wheat alone excepted, which not only ſtood out the extreme dryneſs and heat of the ſeaſon on every ſoil, but even proſpered under it, producing now as fine a ſample as has perhaps been known for many years. Straw, as well as hay, having been greatly ſtinted in the growth, fodder of all kinds is, of courſe, uncommonly ſcarce. Potatoes, which continued to proſper till about Lammas, then fell off much; ſo that if it had not been for the reviving rains in the beginning of September, they would not have turned out above one fourth of an ordinary crop; and, even after all, will hardly amount to one third. Turnip has alſo failed greatly. On the whole, the preſent crop does not appear, by any means, to be ſuch as will make up for the very great deficiency in the crop of the year 1799.

The harveſt, which commenced early in Auguſt, is now nearly finiſhed. Reapers have been had in great abundance, and, of courſe, at moderate wages. Preparations for the next crop are going on with alacrity; and what wheat has already been ſown, whether on fallow or from ſtubble land, has been accompliſhed under very favourable circumſtances.

Prices have continued high, (oat-meal excepted, which being now at 2s. the peck, is more in proportion to the rate of labour), and ſtill have little appearance of declining, notwithſtanding of the immenſe quantity of grain imported into the different harbours of the kingdom. The true reaſon of this (the wretched return of crop 1799, and the doubtful aſpect of crop 1800), has been altogether overlooked, and the whole imputed to machinations of middle-men, foreſtallers, and regraters, thoſe

Gorgons and Hydras, and Chimeras dire!

MILTON.

For, at no period has there been ſuch an univerſal cry of plenty, in the mouths of the newſmongers and public declaimers, as in the preſent, (except perhaps in the year 1782, of ſtarvation memory), accompanied with grievous imprecations, warm from the heart, againſt corn factors and all dealers in grain, with many a ſide-glance curſe alſo at farmers and meal-men. Theſe people, like to the falſe prophets of old, continually call out, Peace! peace! (in the preſent inſtance, a *piece* of bread), while there is no peace. But perhaps, after all, this may ariſe from their own inward conviction; like to the man who fabricated a ſtory about *failing over the Alps*, and told it ſo often, that at length he believed it himſelf. On the other

other hand, the farmers, who are rather a grumbling kind of race, have been ſo long remarked for exaggerating every thing bad in the weather, or bad about the crop, that they are not now believed when they ſpeak the truth.

Return of Grain of all kinds, flour, meal, hulled barley, &c. imported and exported at Leith, from the week ending July 12th, to the week ending October 11th, inclusive. The whole reduced to quarters of 8 buſhels each, reckoning a ton of flour equal to 7 quarters of wheat; a ton of hulled barley equal to 8 quarters of barley; and 4 bolls of oat-meal equal to 3 quarters of oats.

Week ending	*Imported coaſtways.*	*Imported foreign.*	*Exported coaſtways.*
July 12.	1822	1474	3221
19.	2228	1170	2616
26.	3697	4858	2436
Aug. 2.	2638	2476	3391
9.	11,270	4606	2770
16.	6873	1399	2121
23.	2643	4098	1801
30.	1827	7392	642
Sept. 6.	3839	1297	717
13.	109	4188	566
20.	494	1299	807
27.	480	157	1353
Oct. 4.	120	105	1757
11.	603	none	2009
This quarter,	38,643	34,519	26,207
Former quarter,	60,550	37,219	26,699
Coaſtways	99,193	71,738	52,906
Foreign	71,738		
Total	170,931		
Deduct exported	52,906		

Remains 118,025 for home conſumpt, which is ſuppoſed to have been 3000 quarters weekly in Edinburgh, Leith, adjacent ſuburbs, and inland counties to the ſouth and weſt. Hence in 33 weeks, (the time ſpecified), there will have been expended 99,000 quarters, leaving ſtill 19,025 quarters for the Winter conſumpt, in addition to the exiſting crop in the country.

Wheat

Wheat ſold in Haddington market, from October 1. 1799 to October 1. 1800—16,441 bolls. Oat-meal in Edinburgh market, in the ſame period—Lothian 10,149, South Country 125; in all 10,274 bolls.

Fife Quarterly Report.

During July, Auguſt, and the beginning of September, almoſt no rain fell. Dry weather, for ſo long a period, is not remembered by any perſon. The hay, in conſequence, is leſs than half a crop; the after-growth, nothing: for it, as well as the paſtures, were entirely burnt up, brown and withered, and nothing green and luxuriant, except natural meadow, and inferior wet paſtures; for ſuch, the ſeaſon was a good one.

The oats, in general, are a thin crop; partly owing, it is ſuppoſed, to the ſeed being injured, and a wet ſeed-time. They are well filled and ripened, but almoſt no ſtraw, owing to the extreme drought.

Barley, a better crop in general, grain plump and good: but as much of it was arreſted in the ſhoot-blade for want of rain, the ſtraw is ſhort, and the ſtalks of a much ſmaller ſize than the farmers expected from the appearance before cutting.

Wheat, a thin crop, good grain, but little ſtraw.

Beans, a poor crop in general.

Peas, a better crop, extremely well filled, but the ſtraw ſhort.

Flax, a good crop, where the ſoil was properly choſen for that plant. The flax-ſeed ſaved, the beſt in quality ſeen for many years: the dry ſeaſon being particularly favourable, much more ſeed is ſaved than uſual in this county.

Potatoes, entirely ſtinted in their growth for want of rain; the plants dwarfiſh, and did not cover the ground; and, conſequently, an unproductive crop, ripened prematurely. Perhaps owing to this, a phænomenon in that crop has been obſerved this Summer, viz. the few potatoes at the root puſhing out ſtems at the eyes, in the ſame way as ſets planted in Spring; and new potatoes, of the ſize of peas, forming on theſe ſtems in great numbers, drawing their nouriſhment from thoſe firſt formed, and probably injuring them materially. When rain at laſt fell in ſufficient quantity to reſtore verdure to the paſtures, (middle of September), the potatoes began to grow with vigour; the roots increaſed in ſize to a great degree, and the ſhoots from the eyes are not obſerved in ſuch numbers; at leaſt, no new ones appear. Upon the whole, however, the potatoes cannot be reckoned at above half a crop.

7th October.—The harveſt not finiſhed, and rain almoſt every day, ſucceeded by drying winds; ſo that little injury to the crop has yet happened. Harveſt began to be general about 1ſt September; and two thirds of the crop is now well got in; though on ſome farms part of it is not yet fully ripe.

A famine for cattle is dreaded, from the ſcarcity of ſtraw. The price of corn in the ſtraw exorbitant. But it is ſuppoſed, if the weather is tolerable, the ſame calamity to man is not likely to happen.

Turnips, owing to a total want of rain, are a very poor crop, not even equal to half a crop in ſome ſeaſons; which adds to the difficulty of maintaining Winter ſtock.

The graziers complain of heavy loſſes from the failure of the paſture graſs. Many have loſt not leſs than the whole rent.

Fat ſtock ſells well; but, wherewith can the farmer fatten, when turnips, potatoes, hay, and ſtraw, have all failed him?

Hay 1s. 6d. per ſtone, and can only with difficulty be got.

Prices of Victual.

In this county, very little, except foreign victual, was to be found all this quarter. No oats, no barley, no peas. Old wheat, a ſmall quantity in Auguſt, price 40s. to 55s. per boll.

Oat-meal in July, from imported corn, 52s. per boll.

End of Auguſt, fell to 34s and continues at ditto.

Barley-meal, in July, 34s. per boll.

Ditto, end of Auguſt, 23s. 4d. per ditto, and continues the ſame.

No old peas-meal at any price.

New Crop.

Wheat, on 1ſt October, from 40s. to 50s. per boll.

Barley, fine quality, at 35s. per ditto.

No new oats as yet.

A little new oat-meal, at 34s. per boll.

Extract of a Letter from a Farmer in the Upper Ward of Lanarkſhire, Oct. 6.

Our crops here are moſtly got into the ſtack-yard, and they promiſe to yield well. Oats, when mealed, produce nearly meal for corn, and barley 24 or 25 pecks per boll. In the muir-lands, they were laſt week little more than begun to cut, and their crops are thin upon the ground, much bad ſeed having been ſown. There is but a ſmall extent of wheat and peas ſown in this diſtrict; but

but what we have of theſe grains are tolerably good. A larger ſpace than common was planted this ſeaſon with potatoes: the quality of the produce is good, but the quantity will hardly average one half of what we uſed to have in favourable years.

The late rains have done great ſervice to the paſture-graſs and turnips. A conſiderable extent of this valuable root is now ſown here, which we find to be of great advantage for cleaning our lands, independent of the profit ariſing from the crop, eſpecially in a ſeaſon like the preſent, when fodder is ſo ſcarce.

Little ſale for lean cattle; but real fat bring good prices. At Lanark, beef is from 4d. to 6d. per lib.; butter 1s. 3d. to 1s. 4d.; common cheeſe 5d. and 5½d.; oats, with fodder, ſell from 35s. to 40s. per boll; without fodder, 28s. to 32s.; bear 31s. 6d.; hay 1s. 3d. per ſtone; and ſtraw 6d.

Extract of a Letter from Caithneſs, Oct. 4.

We had dry warm weather till the 26th ult.; ſince which it has rained every day. The harveſt was then well advanced; and I do not think the crop has as yet ſuſtained any damage. The crop is light, particularly upon the coaſt-ſide; in the Highland diſtrict it is much better, but very little ſtraw indeed. Bear ſells from 28s. to 30s. per boll; oat-meal from 35s. to 40s. per boll of 8½ ſtone Dutch; bear-meal from 25s. to 30s. per boll of 9 ſtone Dutch; oats from 28s. to 34s.; hay 10d. and 11d. per ſtone; beef and mutton 3d. and 4d. per lib. The market for lean cattle is low; average price 50s. per head. Turnip-crop is indifferent. Potatoes good in quality, but ſcarce.

ENGLAND.

Extract of a Letter from Louth, Lincolnſhire, Sept. 16.

In this neighbourhood, the harveſt is at its height; the greateſt part of the corn is brought home; and, from the information of ſeveral reſpectable farmers, I am happy to learn, that it is in excellent condition. The ſprouted ears are not numerous. The crop is light, compared with that of ſome former ſeaſons.

The rot is appearing among the ſheep, owing to the great flüſh of graſs ſince the late rains. In conſequence, the graziers, who have not land to change their paſture, are ſelling off as faſt

as they can; which muſt render mutton plentiful and cheap for ſome time.

Beaſts for ſlaughter ſell from 6s. to 7s. per ſtone of 14 lib. ſinking the offal; wool, 23s. to 25s. per tod of 28½ lib.; retail price of beef, 5d. to 7d.; mutton, 6d.; veal 6½d.; butter, 14d. per lib. of 18 ounces; potatoes 8d. per peck; milk, 2d. per quart.

There has been ſome rioting at Tatterſal and other villages near Boſton; but, on the Volunteers being ordered out, the rioters diſperſed. The preſent condition of the poor is certainly very diſtreſſing; yet rioting is not the way to procure relief.

Extract of a Letter from a Yorkſhire Farmer, Sept. 6.

Of our turnips, on indifferent land, very few have hit; upon fine ſandy ſoils, they now promiſe to be tolerable. Potatoes are much freſhened of late, and I hope will turn out better than expected. Oats are pretty good in general; barley the ſame, though much ſprouted, in conſequence of the heavy rains. The ground was warm, and ſome people truſted it in the ſwath till it was grown moſt ſhockingly. Part of mine is ſo damaged as to be fit only for hogs. Wheat is alſo pretty good. Some of it, indeed, is ſprouted; and if the preſent hazy weather continues much longer, the loſs will be great. Upon the whole, I truſt that our crop will turn out a tolerable one.

Butcher-meat keeps at 6d. and 6½d. per lib.; and my opinion is, that fat will preſerve its price; for, though the graſs was burnt up, our markets were never overſtocked; and, during the time I have been engaged in buſineſs, they uſed always to flag in a hot and dry Summer.

Extract of a Letter from Hull, Sept. 10.

The corn crops, which were much improved by the dry warm weather, have been damaged by the rains that lately ſet in, and ſtill continue; which make us fear that the quantity of ſprouted grain will be equal to that of laſt year; but the quality being vaſtly ſuperior, the loſs will be more eaſily ſuſtained. The white crops are in general ſmall; a great part is yet ſtanding, and little got in. At our market yeſterday, prices advanced, there being many more buyers than ſellers. Sales for wheat were—Peterſburgh 90s.; Riga 95s. 6d.; Hamburgh, Bremen, &c. 95s. to 105s.; inferior ſorts 80s. to 85s.; ſome as low as 63s.; new wheat, but very ſoft, 80s.; oats,

oats, Ruſſia, 31s. 6d.; Hamburgh, 36s.—all per quarter of 8 Winchester buſhels.

Prices of other Articles here.

Flour, common, 3s. 7d.; middle, 3s. 10d.; fine, 4s. 3d. per ſtone; rape-ſeed, 50l. per laſt; rape-cakes, 7l. per ton; lintſeed cakes, 12l. 12s. per ton; hay, 6l. to 6l. 10s. per ton; ſtraw, 2l. 5s. to 2l. 10s. per ditto; whins or furze, 7s. to 10s. per 120 kids or bundles; wool, 23s. to 24s. per tod; butcher-meat, retailed at 6d. upon an average; beef, wholeſale for ſhipping, 46s. to 50s. per 112 lb.

Imported into this place, from the 28th July to September 1ſt, from foreign ports, as per Cuſtomhouſe liſt,—25,482 quarters of wheat, 8,984 quarters of oats, 1741 quarters of rye, 499 quarters of barley, 186 quarters of peaſe, 976 quarters of beans, and 20 cwt. of flour.

Graſs-lands, which were nearly burnt up by the drought, are now in a flouriſhing ſtate.

Lancaſhire Quarterly Report.

In this diſtrict, the harveſt is chiefly finiſhed, and the crop brought home, in excellent condition. According to expectation, the grain turns out well in regard to quality, (particularly wheat), though, in general, it was obſerved rather thin upon the ground. The markets at Liverpool, and in the neighbourhood, ſtill keep high, though the importations of wheat, flour, &c. at the port of Liverpool lately, have almoſt, if not altogether, exceeded that of any former period. New wheat has hitherto ſold as high as from 13s. 6d. to 14s. and upwards, per meaſure of 70 lb. To-day the market was dull, and very few ſamples of wheat ſhown. New oats have been ſold from 5s. to 7s. 4d. per buſhel of 36 quarts. Oat-meal, from 3l. 10s. to 4l. per load, in this neighbourhood; but I am informed, that, in ſeveral of the market-towns in this county, it is, or has been lately, 3l. per load (and under) of 240 lb. Little of the barley of laſt crop, I believe, has yet been ſold, and that chiefly for grinding. I have heard of 7s. 6d., 8s., and 9s. having been given. The price at preſent, however, does not appear to be ſettled either by the brewers or other dealers. It is much to be lamented, that potatoes have been, and continue to be, extravagantly dear. The regular price has been from 6s. to 8s. per buſhel of 90 lbs. To-day, in the Liverpool market, the price fluctuated between 4s. and 5s. 4d. per buſhel. (It is to be obſerved, that the potatoes here, as in moſt other places, are ſorted, the large being ſeparated from the ſmall ones; and it was

the ſmall potatoes that ſold for the loweſt of the above-mentioned prices). This high price, ſome aſſert, is owing to the failure of the potato-crop in general; whilſt others aſſert, (and apparently with good reaſon), that though the crop may fall ſhort of what may be called a *good* crop, yet, from the large quantities planted, there does not appear to be any neceſſity for the preſent very advanced price. However that may be, the late rains will certainly be very beneficial to the potato-crops, and cauſe the roots to ſwell very much in ſize, as is already very apparent. Though the old paſtures and after-graſs have improved ſo very much ſince the late rains, butter ſells here from 18d. to 20d. per lb. (beſt ſalt butter at 14d.). Hay ſells from 1s. to 1s. 4d. per ſtone of 20 lb. and ſome as high as 18d. per ſtone, but that is chiefly ſome of the very beſt of the laſt year's crop. Turnips, except where ſown very early, have failed in general. The crop of hay, in general, was good, and the quality ſuperior; but, owing to the great ſucculence in the graſs, and the gloomineſs of the atmoſphere, and not being ſuffered to remain till it was thoroughly cured, many ſtacks in conſequence heated; nay, ſome abſolutely fired, and that in greater numbers than ever before remembered.

Sept. 20. 1800.

Lincolnſhire Quarterly Report.

The wheat-crops have, in general, as formerly predicted, turned out light; and ſome, that were then promiſing, have ſuffered much from mildew, which was prevalent in Auguſt. Many fields have alſo received damage from the late wet weather. Barley, notwithſtanding the ſevere drought, will be a productive crop, though, in ſeveral inſtances, where early cut, it has ſprouted; as the warmneſs of the ground, when the rains fell about the 22d Auguſt, produced as ſpeedy an effect as if it had been on the floor of a malt-barn. Some that has been already thraſhed, makes ſuperior bread to the moſt of laſt year's wheat; which, it is hoped, will compenſate for the deficiency of wheat this ſeaſon. Barley-bread is much uſed in Lincolnſhire; and the peaſant, fed upon this aliment, looks equally healthy, and will do as much work as his neighbours who eat their wheaten bread.

Oats likewiſe prove a good crop; and, when generally thraſhed, muſt get lower in price. Beans and peas do not promiſe to be productive. Turnips are, for the moſt part, ſuperior to the crops of ordinary years; though, in a few inſtances, they have failed.

The hay-harveſt was never known to be better; and, though the crop of artificial graſſes was not heavy, yet the goodneſs of the natural graſſes will, in all probability, make up for the deficiency,

deficiency. The clover and trefoil, ſown with the barleys this year, have an excellent appearance.

Fat beaſts are now beginning to be plentiful: and as the paſtures and eddiſhes are very luxuriant, they have met with a conſiderable reduction in price. Of mutton, the markets have had an ample ſupply. Great apprehenſions are entertained of that fatal malady, the *rot*, which has begun to make its ravages among the flocks in the lower parts of the county, and heavy loſſes are dreaded.

Wool has not brought ſuch high prices as expected. Prices are various, according to the qualities. The average of long combing wool may be about 23s. per tod of 28 lib. As the harveſt has, for ſome time, nearly occupied the whole attention of our farmers, little can be ſaid reſpecting the prices of grain; but, as near as can be aſcertained, wheat has ſold from 93s. to 100s.; barley, 63s. to 70s.; oats, 35s. to 45s.; beans, 84s.; all per quarter of 8 Winchester buſhels.——*Sept.* 27.

Norfolk Quarterly Report.

The ſoil of this county is ſo various, and of courſe ſo differently operated upon by every kind of weather, that no *general* deſcription can with juſtice be given of our rural matters. From this difference of ſoil, the harveſt has been a week and ten days ſooner in one place than another, by which ſome have ſuffered little by the long continued rains, while others have ſuſtained very great and material injury. The long continuation of hot and dry weather which preceded this, had ſo heated the ground, and the warmth of the atmoſphere was ſo great during the rains, that it was impoſſible to prevent thoſe grains, at that time cut, from ſprouting; nay, even many inſtances occurred, both in wheat and barley, of its growing as it ſtood. The harveſt is ended, except in the fen-lands, where, I underſtand, they have ſtill a week's work to complete it. The markets are now beginning to receive a regular ſupply. The peas and oats, on the high lands, were in general ſaved before the rains, and are of a very fine quality, as to colour and weight. Such peas, if white, ſell as high as 70s. to 80s.; if grey, 48s. to 50s. per quarter. The wheat-crop being injured in many places by the mildew, and alſo much ſprouted and damp, the quality is extremely various; the market-price of the beſt, whoſe quality is extremely fine, reaching 110s. per quarter; whilſt there are of all gradations down to 60s., and ſome for which no price is offered. The barley-crop, with ſome exceptions as to ſoil, muſt be eſteemed abundant, but the quality extremely various,

except thoſe which were harvelled before the rains. Very few, even of the drieſt and beſt coloured, are free from a ſprouted kernel, and ſome have even one half of them grown; the prices, of courſe, muſt be extremely different. Thoſe of good body, and ſaved without rain, are of the fineſt quality I have ſeen for many years, and were eagerly ſought after by ſome neceſſitous maltſters, even at 80 s. per quarter: that ſpirit is however ſomewhat damped, and ſuch now only obtain 70s. to 72s.—The ſecond quality, which is dry and well ſaved, excepting here and there a ſingle ſprouted corn, and of which the malting ſort muſt moſtly conſiſt, obtains from 46s. to 54s., with all gradations downwards, even to 24s. per quarter. The turnip-crop, excepting *particular ſoils* and *late ſowings*, ſtood the long drought beyond all expectation; and, ſince the rains have come, have experienced a growth and improvement never remembered in ſo ſhort a ſpace of time. This crop may be reckoned very fine. The eddiſhes and graſſes are moſt abundant; but hay, in conſequence of many ſhips loading the ſame for the northern counties, is advanced conſiderably, being now ſold at 4s. 6d. per cwt., and 5s. demanded. Beef and mutton is tolerably plentiful; the former 6s. 6d. to 7s. per 14 lib., and the latter 5½d. to 6d. per lib. You may form your own calculations as to what the grazier obtains, as they generally get 6d. to 9d. per ſtone more on beef, and ½d. to ½d. per lib. more on mutton, according to the ſeaſon, to ſink the offal. At our principal lamb-fair, 4th September, that article went off very ſlow; but wether-lambs obtained 16s. to 19s. per head. The South-down and half-bred went off more ready. Of wool, I underſtand Norfolk has obtained 46s. to 48s.; South-down, 50s. to 52s. 6d.; Long Lincoln, 23s. to 25s. per tod of 28 lib.; but much is unſold. The preparation for wheat-ſowing is going buſily forward, and the ſeaſon is favourable.

Extract of a Letter from Lynn, October 1.

At the commencement of the harveſt, (ſay from the beginning of Auguſt till the 19th of the ſame month), we had remarkably fine weather; and nearly the whole of the rye, peas, and high-land oats, with about one fourth of the wheat, and one fifth of the barley, were ſecured in excellent condition, and are of beautiful quality. Since then, the corn has been harveſted in various conditions, and equally various in quality, particularly the two laſt articles, which are much grown; for, owing to the heat of the earth when the rain came, that which was cut vegetated quicker than ever was known.

The crop of wheat was generally thought, before the rains, a very

very good one; for though it was thin on the ground, the ears were well filled; but ſince then, the greater part has been ſo affected by the weather, that we fear it will be found deficient, as very few ſamples appear that were harveſted ſince, without being in part ſprouted.

The crop of rye is but ſmall; but as it is all harveſted under a good ſun, the quality is very dry, and will yield well.

Barley, no doubt, is a very abundant crop; but there is a great deal of it ſo much grown, that it will be totally unfit for malting. That, early harveſted, is beautiful; and as we have had latterly ſome pretty fine weather, that which was not cut during the firſt rains, and was not fully ripe, is not much hurt: But in all the ſamples harveſted ſince the rain, there will be ſome ſprouted kernels, as it chitted whilſt ſtanding; but we think, on the whole, that which we call our ſecond quality, will be found as kind in malting as the very fine delicate ſort.

The oats are good. The crop alſo in the fens is equally good, in point of quality; but as they are much later in the harveſt, there will be a great variety in the ſamples; yet, upon the whole, they will be found much ſuperior to the growth of laſt year.

Peas are a fair crop, and being well harveſted, of a fine quality. Beans are middling; but as they have been expoſed to the whole of the rains, and ſome even yet abroad, we conſider them injured, and in a precarious ſtate.

Current Prices of yeſterday's Market, as paid to the Growers.

	Per Quarter.		*Per Quarter.*
Wheat, fine -	100 to 110	Barley, coarſe -	24 to 28
Ditto, runs -	80 — 90	Oats, fine -	36 — 40
Ditto, coarſe -	65 — 70	Ditto, coarſe, -	26 — 30
Rye - -	40 — 46	White peas -	76 — 78
Barley, fine -	72 — 74	Grey ditto -	52 — 54
Ditto, ſeconds -	48 — 52	Beans—none appear.	

Rape-ſeed, 48l. to 51l. per laſt.

Northumberland Quarterly Report.

The corn-crops in this diſtrict have been materially injured from ſeveral cauſes. The grub, in the Spring months, in a great meaſure, deſtroyed the wheat and oats upon clover leas, where the ſoils were ſtrong or moiſt. Upon dry, ſandy, or gravelly ſoils, the extreme drought checked the growth of barley and oats ſo very much, that, in many places, the ear did not get half out of the ſhot-

ſhot-blade, and the ſtraw was ſcarcely a foot high. Upon the real good mellow loams, the crops were remarkably fine, and nearly all the early oats cut, when the firſt rains began on the 23d Auguſt, by which the whole of the ſheaves were ſo completely wet to the heart, that it was neceſſary to open them out, to get dried again; and juſt when they were a ſecond time fit for leading, the wet weather ſet in on the 4th September, and continued, without intermiſſion, till the 10th, by which they were again completely drenched, and a great deal in a growing ſtate, in ſome places ſprouted quite green, and ſo diſcoloured, as renders them totally unfit for the London market. But this was not the worſt: they were again obliged to be opened, and laid in broad bands; and, being ſo tendered with the wet, the grain hulled out in ſuch quantities, that the loſs is ſcarcely to be eſtimated, beſides the ſtraw being ſo materially deteriorated for Winter fodder. But the evil did not reſt with the crops that were cut, and in ſheaves or ſtooks. The *ripe crops* of wheat and barley that were *uncut*, and *ſtanding perfectly upright*, were, in many places, ſprouted to ſuch a length, and in ſuch abundance, that probably the oldeſt farmer never ſaw another ſuch inſtance, nor ſo great a loſs afterwards, in ſhearing the wheat, by the grain hulling out, from its being ſo tendered by wet weather. Upon the whole, I am ſorry to add, that the crop of white corn is conſiderably below an average.

Peas and beans are a very abundant crop. Few people ever ſaw them ſo well loaden, or ſo perfectly ripened.

Turnips were beginning to change colour the two middle weeks in Auguſt, and the moſt unpleaſant apprehenſions were entertained for their ſafety: but the rain came exactly in time, and reſtored them to health; and ſuch a vigorous and rapid growth enſued, that they have the moſt promiſing appearance of being a very abundant crop. Had not this been the caſe, the ſituation for Winter food would have been truly alarming, as our crops of hay and ſtraw are not much above half their uſual bulk.

Potatoes, I am afraid, have alſo been injured by the drought, upon ſandy and gravelly ſoils, on which, it is ſaid, they are not ſo productive as expected.

The demand for caſt ewes and ſhearling wedders, has been very briſk; the prices better than laſt year, by about two ſhillings a-head. The cattle were alſo well ſold at St Ninian's fair, (the 27th September), to drive ſouthward.

The preſent prices of corn are—

Wheat,	10s.	to 12s.	per	Wincheſter buſhel.
Barley,	6s.	to 7s.	per	ditto.
Oats,	4s. 6d.	to 5s.	per	ditto.
Peas,	8s.	to 10s.	per	ditto.

The

The harveſt has been long and tedious: it began the 1ſt of Auguſt, and is yet unfiniſhed.——*October* 4.

Extract of a Letter from a Farmer in Wales, September 30th.

"We had a remarkably dry Summer; ſcarcely a ſhower from the middle of May till the 19th of this month, ſince which it has rained and blowed by turns. The graſs was entirely burnt up; and ſome farmers on the clay lands had to fodder their cattle with hay, before the corn-harveſt commenced. Hay is, in general, a fair crop, but much of it was carried too ſoon: where it got time to win, the quality is excellent. Our corn-harveſt commenced about the 8th of Auguſt, and was nearly over in three weeks. It came on all at once, except ſome late barleys, which are not worth reckoning. Wheat improved every day till harveſt, and will be a ſaving crop, which is more than we expected from previous appearances. Oats are very ſhort, but well corned; ſmall in the grain, which does not fill the meaſure well. Barley does not exceed half a crop: on the beſt land it was thin, and, on the clays, it will ſcarce pay for the gathering. The few peas ſown here are good. Potatoes very bad. Few turnips, moſt of them being ploughed down, and the land prepared for wheat. Corn-markets fluctuate much. Immediately after the harveſt, wheat dropped from 55s. to 26s. per buſhel of 20 gallons: it has again roſe to 33s. and 34s. Barley from 18s. to 20s., and oats 16s. and 17s.; but our buſhel for that grain is nearly equal to four Wincheſter ones. Seed-tares, 30s. No peas or beans at market. Butter, 1s. 3d. per lib. of 16 ounces. Cheeſe of ſheeps milk, 9½d. and 10d.; of cows milk, 9d.; of ſkim milk, 6½d. Beef, from 5d. to 6d.; mutton, from 4½d. to 6½d.; veal, 5d.; pork, 5½d. Hay, from 4l. to 6l. per ton; and ſtraw dearer in proportion.

If we could believe the newſpapers, the crop in Britain is, this ſeaſon, very great: but, when I read of the vaſt crops of corn and potatoes in Glamorganſhire, I can give but little credit to what is ſaid concerning other counties. It is owing to ſuch miſrepreſentations, that we had ſo much rioting in this quarter. Laſt week, the forge-men occaſioned much diſturbance; but, thank God, they are now quiet, and the gaol full of them."

Extract of a Letter from Stafford, October 5th.

"In conſequence of the late commotions here, and in other places of the county, the Mayor requeſted the principal farmers to attend him

him at the Town-hall on the 26th ult. to ſettle the price of wheat; when all preſent agreed to ſell at 12s. per buſhel of 38 quarts, though many have ſold lower, which, I fear, will not be followed up. Our crops have greatly failed for want of rain: before harveſt, we had not more than one day's rain for two months: therefore the bulk is ſmall indeed. I have only threſhed a few buſhels of wheat, for my houſe-conſumption; but the grain, though good, is lighter than ordinary. My barley weighs 60 lib. and oats 48 lib. per cuſtomary buſhel of 38 quarts. As yet I have only ſold 188 buſhels of the former, for which I got 9s.; but yeſterday, owing to a great demand, it got up to 9s. 6d. and 10s.; oats, 6s. 6d. to 7s.—Laſt Thurſday was our great fair. Beaſts of every kind ſold high.

I will give you an inſtance of our oppreſſion from tithes, the major part of which, in this county, ſince the days of Henry VIII. are in lay hands. Laſt year I paid 34l. in lieu of them. This year I was ſuffered to carry, before they fixed the price; (good weather ought never to be paſſed); and though I have ten acres of leſs corn than laſt year, yet they have charged me 52l. to be paid on 26th January. I wiſh you to read my friend Mr Boulton's letter in the Stafford paper, with attention. Three great Lords have put a negative upon the incloſure of Needwood foreſt, thinking that beneficial meaſure would interfere with *their favourite purſuit of running after a ſlinking fox*. From ſuch friends to their country, good Lord deliver me!

I once deſpaired of my turnips; but the fine rains, ſince harveſt, have brought them forward beyond all expectation, particularly the Swediſh ones, which promiſe to be an abundant crop. Beef and mutton was yeſterday from 5½d. to 6d. per lb.

Extract of a Letter from Rippon, (Yorkſhire), October 9.

In hopes of being enabled to inform you, that our crops were ſafely harveſted, and prices reduced, I have delayed writing you till this time; but am ſorry to ſay, that the heavy and continued rains have injured our grain very much, and that there is little of it free from ſprouts. The prices are rather lower, but by no means ſo much reduced as expected; and I fear they will continue higher than the poor and middle claſs of people can poſſibly pay.

A large quantity of potatoes were planted laſt ſeaſon, but they are ſaid to be unproductive. The rains at preſent are great, which will prevent the fallows, intended for wheat, from being ſown in due time.

Prices

Prices of Grain, &c. at our Market this day.

Wheat 10s. to 14s.; maſlin 10s. to 13s.; beans 10s. 6d.; barley 6s. 3d. to 6s. 9d.; oats 4s. to 5s. 3d.; potatoes 3s. to 4s. 4d.; all per Wincheſter buſhel. Butter 60s. to 63s. per firkin of 56 lib.; beef 5d. and 6d.; mutton 6½d.; lamb 6d.; veal 7½d.; freſh butter 17d. per lb. of 21 ounces.

Extract of a Letter from London, October 10.

The crops of grain in the vicinity of this city, are in general very middling. Wheat on the ſtrong clays of Middleſex is very light, and will not average above 12 buſhels per acre. Beans are good, but the produce not yet ſufficiently aſcertained. In Hertfordſhire, the wheats are fine in quality, and the produce great. Barley is alſo a good crop; from ſix to eight quarters per acre being produced in ſeveral places. In Eſſex and Surry, a conſiderable part of the crop was out when the rain ſet in; and much of the wheat is ſprouted, even of what was then uncut. The white wheats were moſt affected; the red being in few inſtances hurt, except where it was lying upon the ground.

We have hitherto received but a ſhort ſupply of new grain, and prices have been advancing ever ſince the middle of Auguſt. Fine Engliſh wheat ſells at 120s. and 126s.; barley 70s. to 76s.; oats 45s. to 46s.; beans 50s. to 56s.; old ditto 63s.; hog peas 54s.; boiling ditto 96s.; ſplit ditto 120s. to 126s.; all per quarter of eight Wincheſter buſhels.

The average weight of wheat is about 59 lib. per buſhel; barley 50 lib.; oats 40 lib.; beans 56 lib. The millers ſay, the wheats do not yield ſo much flour, by 28 lib. in the quarter, as in former ſeaſons. Probably this may be owing to the great part of what has as yet appeared in Marklane being of inferior quality; as farmers naturally bring out at firſt that which is moſt likely to loſe by keeping. The new oats are ſuperior to any ſeen here for a long time; but we have hitherto had a ſcanty ſupply; and good old ones are difficult to be got. We have had no arrivals from abroad, of conſequence, for a month paſt.

Smithfield market has been lately well ſupplied. Potatoes are conſidered as a middling crop, prices from 7s. to 12s. per cwt.; hay 6l. to 6l. 15s.; clover ditto at 7l. per load; ſtraw about 1s. 3d. per truſs.

POSTSCRIPT

POSTSCRIPT TO SCOTS INTELLIGENCE.

Extract of a Letter from Haddington, Oct. 17.

The demand for wheat was briſker than for ſome days paſt, and the average price advanced conſiderably. Very little old wheat remains on hand; and what is preſented, is of miſerable quality.

Barley was rather dull; but oats ſold fully better than at laſt market. Peas and beans likewiſe advanced. Our ſupply of oats and peas has been ſcanty for ſome time paſt.

Since Tueſday, the weather has been very fine and dry, which has allowed the remainder of the crop to be brought in in ſafety to the ſtack-yard. A good deal of wheat has been ſown this week; and if the favourable weather continues eight days longer, the greateſt part of the wheat ſeed in this county will be got finiſhed.

As an inſtance of the attention now paid to ſtock in this county, one of our moſt reſpectable farmers lately purchaſed a lot of breeding ewes, at a ſale in Berwickſhire, at five guineas per head; which, we hope, will be the means of exciting a more general attention to that mode of huſbandry, than hitherto has been cuſtomary in this diſtrict.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

If you have a ſpare corner in the Magazine, pleaſe give a place to the annexed extract of a letter, lately received from an eminent foreign political writer, who made a tour through Scotland laſt Summer; and oblige yours, &c.

A Friend to the Magazine.

"One of our firſt cares, after arriving in Edinburgh, was to provide ourſelves with the two firſt numbers of the Farmer's Magazine. We have already peruſed them; and all I have to tell you about it is, that we unanimouſly range ſuch publications amongſt the principal cauſes of the active ſpirit of improvement that pervades this iſland, and particularly this part of North Britain. We all agree upon the general ſuperiority of the Britiſh Agriculture, over that of the Continent; but it is not ſo eaſy to agree upon the cauſes; for they are ſo numerous and complicated, that they might well furniſh matter for a very comprehenſive work."

OBI-

OBITUARY.

At Longrigg, Berwickſhire, Joſhua Tait, Eſq; an eminent farmer and grazier.

At Wecton, Yorkſhire, Mr J. Craven, farmer, aged 88. He was married 11 years ago, to a young woman, aged 16, by whom he had three children, and who is at this time in a ſtate of pregnancy.

At Malton, Yorkſhire, Mr Witty, one of the firſt horſe-dealers in the north of England.

Mr Samuel Preck, farmer at Hardwick, Suffolk, aged 83.

At Goodleigh, Devonſhire, Mr Henry Stibbing, farmer. He was a great fox-hunter, and had collected as many foxes pads as covered his ſtable door and door-poſts, having been in at all their deaths; and, at his own particular deſire, a pad was placed in each of his hands when laid in the coffin.

At Fillieſide, near Edinburgh, Mrs Ann Horn. Since her death, the farm of Fillieſide, conſiſting of 160 acres of arable land, has been ſet by public roup, at the amazing rent of 1110l. Sterling per annum. We underſtand the old rent did not exceed 400l.

NOTES TO CORRESPONDENTS.

The Rural Inquirer, No. III. is unavoidably poſtponed.

The *plan of a leaſe and cultivation table, adapted to the weſt-country climate*, is received, and under conſideration.

Firſt part of a Tour through the Northern Counties of Scotland will appear in our next.

We offer thanks to our numerous Correſpondents, (particularly to thoſe who have taken the trouble to collect intelligence); and are extremely ſorry, that want of room prevents us from giving them all a place, notwithſtanding that *ſixteen additional pages* are given.

We will be obliged to any of our friends in Dumfries-ſhire or Galloway, who will report the ſtate of huſbandry in theſe diſtricts.

The Title-page and Index to this Volume, will be given with next Number.

No. V. will be publiſhed on Monday, 12th January 1801.

END OF THE FIRST VOLUME.

Printed by J. Wilſon, *Craig's Cloſe, Edinburgh.*

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THE FIRST VOLUME.

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